THE FARMERS' CABINET,

Devoted to Agriculture, Horticulture, and Rural and Domestic Economy.

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Beet Culture.

(Concluded from our last number.)

GENERAL REMARKS.

The important uses to which the beet is now applied, having attracted great attention to its habits, it is found under some circumstances to degenerate; the seed of the white plant producing yellow and red roots; this tendency may be checked by changing the seed from clay to sandy, and from sandy to clay soils. Experience may show that changes from the North to the South, and from the South to the North, would be attended with good consequences. The seed, if carefully preserved from moisture, insects, and vermin, will keep for several years, but after four years, it will not be prudent to sow it. When the object is to make sugar, care should be taken to have seed that will produce white roots, and early sowing will afford the opportunity of commencing the crushing and boiling at an early period. French writers on the subject inform us, that the early bruisings produce the largest proportion of sugar. Some of their remarks on soil, it is difficult for Americans to understand, as in this country we have no chalk soil. The routine of crops where the beet is cultivated is very varied. Some French farmers plant potatoes the first year, beets the second, and clover the third—and repeat. Now we do not understand how clover can be made to follow beets, or how it could grow when sown amongst them, as it would be destroyed by the process of working the crop—but they may have an annual clover we are not acquainted with. Others sow beets two years in succession, oats the third, clover the fourth, and repeat. And one man is mentioned, who has sown beets with success, for fifteen years in succession on the same land; his practice was to change the nature and kind of manure, and dressing, put on the land.

In this country, as yet, there is nothing of strict system in the rotation of crops. The important article, Indian corn, grown all over the United States, and tobacco and cotton, in particular districts, renders it necessary for us to adopt a system suited to our circumstances and resources; our farmers have to exercise their own judgment, and select practices suited to their particular positions.

In most instances, the beet crop will not be got off the land early enough to be followed by wheat, and late sown wheat in general is not a safe crop. Wheat is found to yield more grain with a less show of straw in those cases where manure is not directly applied to it, but to a previous crop. Where manure is immediately applied to wheat, it is more liable to mildew, than where it has been used to a preceding crop.

When the beet is employed in feeding cattle, one of the effects will be, to produce more and *richer* manure, and this will place in the farmer's power the entire command of his farm,—he can do with it whatever he pleases. Every encouragement is held out for the culture of beet. It being a green crop, draws much of its nourishment from the atmosphere, and in place of exhausting the land, leaves it in fine order, for any crop the farmer may choose to put on it. Beets in no way interfere with the cultivation of wheat, clover, barley, Indian corn, potatoes, turnips, &c. With the aid of a few beets, the profitable effects of that most useful grain, Indian corn, will be greatly increased in feeding cattle. Calves fed with beets or roots in their first winter, will generally be as good animals at the end of two years, as those that have

been fed the first winter on dry food and corn, will be at the end of three years.

The raising a portion of beet is interesting to every farmer, inasmuch as the seed required to commence will put him to little expense, and afterwards he can supply himself; the business of his farm is the same as if he had planted an extra acre of potatoes, and the effects on milk, butter, cheese, fattening pigs, &c. is immediate. But on this crop, as in most new things, people will entertain different opinions; the merits of the question may be safely left to the decision of SELF INTEREST, in a country where the people are fond of beef, butter, good meat and profit. The object of this paper is simply to furnish some information on the subject.

Although the intention of this paper is to call the attention of farmers, to the raising of Beets, with a view to the improvement of their stock of cattle, their land, and their circumstances, it will not be out of place to draw their attention to another branch of the business of agriculture, that proves profitable to the husbandmen of other countries, and which is here more and more assuming an inviting appearance.

The best spermaceti oil, burnt in lamps, is now selling in Philadelphia at one dollar and fifty cents a gallon. The practice of using oil for lighting our houses, and its price, have for years been on the advance, and in consequence of the great number of whaling ships, the number of fish must be decreasing, and those that escape the fishermen, become more wary and shy. If oil, in consequence of these *growing* causes, is so high in the seaboard towns, it will be higher in those of the interior, in proportion to the expense and hazard incident to transportation; therefore the farmer in these districts, has so much more inducement to raise the plants from which oil is made.

Most earnestly we recommend to farmers and planters, the growing of Rape, which is a species of cabbage, or rather of greens, as it does not head. The French call it Colza—and it is from seed of this plant, that great quantities of oil is made by the French and the English; and the former, make from poppy seed abundance of table oil, so good in quality that it answers all the purposes of olive oil, and is much cheaper.

Those who are acquainted with the cultivation of these plants, (the Rape and Poppy,) harvesting the seed, and making the oil, could confer great service on the country by publishing the processes, or such of them as they are acquainted with; and there is every reason to presume, the Publishers of the "Farmer's Cabinet,"* published in Philadelphia, the "Cultivator" at Albany, the "American Farmer" at Baltimore, and the "Farmer's Register" at Petersburgh, &c. &c., would give the communications a place in the columns of their very useful periodicals.

It is with farmers, as with manufacturers, merchants, and tradesmen of all descriptions; all are exposed to the fluctuations constantly operating on trade and commerce, influencing prices, supply, and consumption; and every one should observe the improvements that are made in the arts and sciences that relate to his particular business. For it is not to be disputed, that all other things being equal, those who are best informed, with the same extent of industry, are to be most successful. And while the manufacturer is diversifying his productions, and lessening the quantity of labour required to make them, the merchant is performing voyages in twenty-eight days, that formerly employed three months, and letters pass between New York and Liverpool with nearly the regularity of a well-conducted mail-coach, and go with greater speed. The farmer must exert himself also, or be laid under contribution to the more active; while he is neglecting to study the nature and qualities of soils, manures, the kind of grain, plants, and cattle best suited to his circumstances, the most effective manner of employing labour—and economizing time and every thing about him,—the manufacturer is calling to his aid a stream of water, or steam engine, and with one or other of these agents, and the assistance of a few women or children, is converting bales of low priced raw cotton into costly cloths; or by employing a few sturdy men, iron ore into cart wheel tires, ploughs, needles, &c. &c., a few pounds of which will pay for the bale of cotton, barrel of wheat, or barrel of pork—nay, there are cases in which this will be done by a few ounces.

It is somewhat remarkable that there are few distinguished and celebrated farmers or planters, in comparison with tradesmen, engineers, and manufacturers. The truth is, the profession of husbandry, although it can be carried on in some way or other by most men, is one of the most intricate and diversified; influenced by causes, the laws of which are hardly known;—for example, of vegetation, the manner in which manure acts, the operation of lime, gypsum, &c. and the nature of soils, the grains and plants most suitable for soils and circumstances of the farmer, the seasons, the weather, the habits of plants, the nature, effects, and habits of insects, the grains, grasses, fruit trees, the adroit skill to secure the proper moment for sowing, harvesting, ploughing, and the innumerable operations and occurrences of a farm, influenced as they are by the vicissitudes of weather, and the

* We invite communications on those subjects.

talents to understand all that relates to these constantly operating causes, with the power to make the most of them, are more rarely concentrated in one person, than the knowledge and capacity to be eminent in the other professions,—this, and the defused position of farmers, form some of the causes to which may be ascribed the circumstance of there being few pre-eminent farmers.

But it is evident that this all-important business has now entered upon a new epoch, and which is manifesting itself in more attention to the selecting of good seed, new articles of culture, whereby the rigours of winter are equalized with the food of summer—better breeds of cattle, and above all, by the number and excellence of the treatises and periodicals that are published in this country, and Great Britain, and to which every farmer should attend, and be especially careful to see that his sons read and reflect on the subjects they treat of.

Improve the Soil.

The article which follows points out several methods of improving the soil. Every farmer knows very well the superior profit of a fertile soil in the production of crops that liberally repay him for his labour; but every one is not equally sensible of the various ways of enriching his lands, nor does he eagerly embrace every opportunity within his knowledge.

Farmers should awaken and look to the importance of this subject, embrace every chance within the reach of their means and information, to render their soil more fertile; and they will soon find a permanent improvement, and it will give better crops with less labour, for a mellow fertile soil is the most easy to work. Many means of improving the soil are neglected for want of information, and when new plans are recommended they are adopted slowly, as many cannot confide in any practices that were not sanctioned by the usage of our forefathers.

"The golden rule in agriculture is to apply such manures and tillage as will make heavy land lighter, and light land heavier, cold land hotter, and hot land colder." He only is a farmer who knows and follows this rule.

Lands are seldom so rich but it may be a matter of gain to increase the fertility; and few tracts are so poor but that with proper tillage and manuring, they may be made the residence of plenty.

Manures are composed of all those substances which either directly or indirectly, supply plants with their requisite food, by means of which they are enabled to expand and come to maturity.

In the first place, the different earths will serve to manure each other. Thus, clay is a fertilizer of a light sandy soil, and sand is equally a fertilizer of clay. Where clay is applied to a sandy soil, it should be carted on in the fall, and spread evenly over the ground, that the frost may pulverize it before it is mixed with the soil in the spring.

The better these earths are mixed in the respective soils, the more sensible and immediate will be their effect: but their principal excellence is that they are calculated permanently to improve the soils to which they are applied. Stiff loams are also in the same way assisted by sand, and sand again by these; but neither in so great a degree as in the former case. Generally it may be observed that all light, dry soils are improved by being mixed with heavy earths, and *vice versa*.

Sand and fine gravel will greatly fertilize the soil of bog meadows, and this earth again is very good manure for all upland soils. It is peculiarly excellent for Indian Corn when applied to the hills, and is very good for flax, hemp, and most other summer crops. Like gypsum, it is friendly to the growth of white clover. When applied to upland grasses it should be laid on as a top dressing. Every kind of black mud from ponds and swamps, answers a somewhat similar purpose; though if the mud be stiff and clayey, it should only be applied to a light dry soil.

The different sorts of marl found in bog swamps are also excellent manures for all upland soils. These earths are usually found at the depth of from one to three feet from the surface, and are either of a white, gray or brownish colour. The former is the most efficacious, and the latter the least so, their strength being in proportion to the quantity of carbonate of lime they contain. It is best to mix these earths with the mass of black earth or bog dirt, that forms the upper stratum, in order to reduce their strength, and when thus mixed, a load of even the weakest kind is more efficacious than two of common barn dung.

Their operation as manures is similar to that of the Nova Scotia gypsum, have little or no effect when first applied to wheat and rye; but by its afterwards covering the ground with a thick growth of white clover, it is rendered fit for producing largely of these crops. The same may be observed of the bog dirt. Like this, these marls are peculiarly excellent for Indian corn, and all summer grain, and a less quantity is sufficient. They may be used as top-dressing or otherwise.

Ashes as a manure are found to be more efficacious in some parts of the country than in others, generally most so, when applied to lands near the ocean. In some parts where the soil is extremely light and the bottom sand, the farmer can afford to pay 12½ cents

a bushel, while in other parts, they are suffered to lie untouched about the potasheries.

Ashes generally answer the most valuable purposes when applied to Indian corn, particularly where the soil is not suitable to this plant. Where the soil is wet, cold, loamy or clayey, the plants are apt to get stunted with the cold rains which usually fall after planting; and then the ashes serve to supply the natural deficiencies of the soil, till it becomes fertilized by the sun. But where the soil is natural to the growth of this plant, and there is no danger of its being stunted at its outset, perhaps it may be better to apply the ashes later, so that the plants may derive the greatest assistance from this manure, while the ears are setting and forming.

Ashes should generally be used for top-dressing; their salts lose nothing by exposure to the air, and soon find their way into the soil.

Soot is much more efficacious than ashes; beside salts, it contains oil. The soot of coal is esteemed equally as good as that of wood. It is used for top-dressings, and requires about 40 bushels for an acre. When applied to winter grain it should be sown in the spring; and the same may be observed of ashes. Coal soot is particularly very good for meadow lands which have become sour and mossy. This manure, can, however, only be had in considerable quantities in large towns.

Of salts, which serve as manures, the principal are the common sea salt, urine, stale of cattle, sea water, saltpetre and alkaline salts. To the latter, the virtue of ashes, as a manure, is principally owing. Soapsuds is in part valuable on account of its alkaline salts, and perhaps the neutralized oil it contains adds much to its value. It is usual to throw this manure away; but this is a needless waste. It may be taken in the watering pot and strewed over the garden, where it will be of great service as a manure, and in expelling insects.—*Yankee Farmer.*

The Hog-Pen a Mine of Wealth.

(From the American Swine Breeder.)

The allotment of suitable enclosures, and the construction of convenient pens for swine, are matters of great importance to those who rear these animals with a view to profit. The miserable custom of permitting swine to roam at large, unattended by a swine herd, and allowing them to gather food throughout extensive districts, cannot be too severely reprehended. It is desirable that every farmer who consults the comfort of his animals should have both pens and pasture—the latter well covered with clover, of small dimensions, and, if possible, affording the hogs ready access to water. To effect this object, the fences which enclose the pasture may be extended so as to embrace a portion of some running stream, or if this is not practicable, some spring, from which water may be constantly flowing into an artificial reservoir. It is found that hogs thrive better, when they enjoy the means of slaking their thirst as nature prompts them, than when they are restricted to water drawn from wells and furnished at stated intervals. Even in the absence of a stream suitable for the purpose, or a spring, water should, if possible, be conveyed, to some artificial pool or trough, in sufficient quantities for their use at any moment. The size of the pasture will of course depend, to some extent, on the situation of the farm, and number of hogs. In general, however, where the herd is numerous, it is deemed advisable, to scatter it in different enclosures, placing those hogs that are nearly of the same age and strength together. Small orchards, well set in clover, afford an excellent pasture for hogs. Their manure greatly enriches the ground; while the roots of the trees, near which, in such enclosures, their rooting propensities are mostly exercised, derive great advantage from frequent loosening of the soil.

It is a matter of great importance to the farmer to provide such enclosures, and adopt such treatment, as will secure from his hogs the greatest quantity of manure. Hog manure is extremely valuable, and large quantities may be obtained with slight attention. Where these animals are allowed the range of small yards or pastures, the method pursued by a correspondent of the Farmer's Cabinet, will prove advantageous:*—"I usually keep and fatten, he remarks, four hogs in the year; these I keep confined in a yard twenty feet square, with a warm and convenient shed attached thereto, as a shelter for them during the night time, and in cold and stormy weather." Into the yard he placed the scrapings of ditches, the dirt that is continually in and about buildings, and this became mixed with the straw with which they were littered. The whole was cleared out as often as was judged expedient. The quantity and quality of the manure would be greatly increased, if the pen was supplied with weeds, (an excellent way this of turning these noxious plants to a good account,) and in the absence of weeds, which by the way is not very common, even on our best cultivated farms, resort may be had to the woods; here the farmer has an abundance of leaves and other rubbish that may be used to great advantage. "By the adoption of the above course, more than twenty-five loads of manure was obtained, as the product of four hogs, and this, too, of a superior quality to

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* Vol. ii. p. 43.

that generally derived from the stable or yard."

Another writer in the Yankee Farmer,* says:—"My plan is this; yard the hogs through the year. Give each hog, to work upon, ten loads of manure from the swamp. Some men think to avoid expense in keeping, by permitting their hogs to 'run at large,' or in a large pasture. This is a bad practice; the hogs 'run away' so much of their flesh, that it requires nearly as much to keep them in a thriving state as if they were yarded. If it did not, the pasture would be much more preferable for other stock. More than this, the hogs will convert about four loads more of mud into good manure, which will more than twice pay the extra cost of yarding."

Another correspondent still, of the same paper, remarks:†—"I keep my sty well littered with straw, leaves, weeds, soil from the woods, and meadow earth, obtained from ditching, by carting, together with that put into the yard, from two to ten loads per week. I sometimes put a few handfuls of rye in different places in the yard, and let in the hogs. Feeding them there for a few days, they completely stir up and commute the contents of the yard. I am confident that I make four times the quantity of manure my father did, and with no increase in the number of stock, and of a little better quality, too, comparatively none of its strength being washed away by the rains and evaporated by the sun."

The suggestions of a correspondent to the Northern Farmer, quoted in the Farmer's Register, contain much information on this subject. After stating the reasons which induced him to abandon the ordinary mode of suffering his pigs to run at large, for the better one of confining them in pastures—and his subsequent exchange of this for a smaller enclosure, which he contracted from time to time, until satisfied that a yard of twenty feet by fourteen, was sufficient for six hogs, if well supplied with materials to make manure in to advantage, he thus continues:—"My method of supplying these materials is the following; after having cleared their yard at the season of planting, I put into it such portions of straw as I may have on hand after the season of foddering is past; and if I have not a sufficient quantity of this to furnish the necessary supply till vegetable substances attain a sufficient growth to be profitably collected, I put in earth, collected from the low places by the side of the highway; though this I more generally place in or near my barn yard, in a situation to receive and retain the wash that might otherwise escape from that. Brakes and weeds of any kind are valuable. These I make use of, to the extent they are attainable, when in a green state, as I consider green vegetable substances, for this purpose, far more valuable than dry. Potato tops, when pulled for early use, before they become dry and shrivelled, I consider equal if not superior to any other green substance for this purpose. Pea vines I usually put into my hog yard after the peas are thrashed off, and if some are put in before being thrashed, they are as gratefully received by the inmates of the yard. The quantity of manure made by my hogs is, for each one, double that made by each cow for the same period of time. The quantity of vegetable matter suitable for manure, that remain in most crops after the fruit and grain is selected, and the amount of manure that can be obtained if this matter is carefully collected and carted to the pens of hogs and other animals are indeed astonishing. "The expressed cane," says J. H. Cowper, in an able communication to the Southern Agriculturist, "tops and leaves, from an acre of cane, yield about 10,000 lbs. of dry vegetable matter. An acre of corn, including blades, stalks, husks, and cobs, gives about 3500 lbs., when the yield of corn has been twenty bushels; and the after crop of peas 1000 lbs.—together 4500 lbs. An acre of solid peas 2000 lbs. The potato vines, pumpkins, and turneps, being eaten green, contribute only to the production of fluid manure. The total quantity of vegetable matter to be applied to the manuring of sixteen acres in crop, will therefore be—

Four acres in corn, at 4500 lbs. per acre	18,000 lbs.
One acre in peas and turneps	2,000 "
Three acres in cane	30,000 "
	50,000

which, if merely rotted by the rain, will yield 100,000 lbs. of manure, and if rotted by urine and dung of stock from 150,000 to 200,000 lbs. or at least 25,000 lbs. of manure to each of the four acres proposed to be manured.

We are inclined to dwell still longer on the subject of manure, because its great importance, and the proper modes of collecting the greatest quantity, seem in many portions of our country to be wholly overlooked. Especially is this the case throughout the western states. Trusting to the extreme luxuriance of the soil, the lands of many farmers are burdened with one exhausting crop after another, until at length the productiveness of the farm is materially reduced, and finally measures are necessarily resorted to, to improve an impoverished condition of the soil which proper manuring would have prevented altogether. Many persons seem to consider a yard where the dung of animals can be collected, sufficient for all purposes—little dreaming that upon the construction of this enclosure depends both the

* Vol. iii. p. 410. † Vol. i p. 67.

quality and quantity of the manure; that successive rains may be gradually washing away the most fertilizing portions of their yard, or excessive fermentation causing the escape of gases which, if possible, should always be retained. The dung of animals, when intended for manure, should be protected as far as practicable from exposure to the air. "He," says Arthur Young, Esq., "who is within the sphere of the scent of his dunghill, smells that which his crop would have eaten, had he permitted it. Instead of manuring the land, he manures the atmosphere, and before his dunghill is finished, another parish and perhaps another county." "As few exhalations," remarks Fessenden,* "as possible, ought to be suffered to rise from the excrements of animals. Fresh manure ought to be kept as carefully from the sun and rain, as grass which has been cut for hay. But how are these objects to be effected! The answer is an easy one. Prevent the rain from draining off the best portions of the manure, by constructing a yard in a dishy form, lowest in the centre, so that the urine of the animals may be collected in a reservoir and retained; and prevent fermentation, or absorb its products by occasionally scattering over the dung-heap a quantity of the same earth with which the yard is bedded. "Earth," remarks the author of the letters of Agricola, "is a powerful absorber of all the gases which arise from putrefaction. Put a layer of common soil along the top of a fermenting dunghill, from twelve to eighteen inches thick, and allow it to remain there while the process is carrying on with activity, and afterwards separate it carefully from the heap, and it will have been impregnated with the most fertilizing virtues. The composts which of late have attracted such universal attention, and occupied so large a place in all agricultural publications, originated in the discovery of the absorbing power of the earth, and in the application of it to the most beneficial purposes. A skilful agriculturist would no more think of allowing a violent fermentation to be going on in his dunghill, unmixed with earth, or other matter, to fix and secure the gaseous elements, than the distiller would suffer his apparatus to be set at work, without surmounting his still with the worm, to cool and condense the rarified spirit which ascends to evaporation. In both, the most precious matter is that which assumes the aeriform state; and to behold it escaping with unconcerned indifference is a demonstration of the most profound ignorance.

A slight fermentation in a dunghill, may indeed be advantageous in causing the woody fibre, contained in many of the substances deposited there, to decay and dissolve, but wooden fibre is the only vegetable matter that requires this process to render it nutritive to plants. In the straw of chaff and litter, as well as the leaves and other products of the forest—which may be advantageously placed in barn yards for conversion to manure—will be found considerable portions of fibrous matter, which must be fermented to be useful. It therefore becomes a matter of great importance to ascertain correctly how far this process of fermentation should be allowed to proceed. On this point Sir Humphrey Davy remarks:*—"In all cases where dung is fermenting, there are simple tests by which the rapidity of the process, and consequently the injury done, may be discovered. If a thermometer, plunged into the dung, does not rise to above 100 degrees Farenheit, there is little danger of much aeriform matter flying off.

"When a piece of paper, moistened in muriatic acid, held over the steam arising from a dunghill, gives dense fumes, it is a certain test that the decomposition is going too far, for this indicates that volatile alkali is disengaged.

"When dung is to be preserved for any time, the situation in which it is kept is of importance. It should, if possible, be defended from the sun. To preserve it under sheds would be of great use; or to make the site of a dunghill on the north side of a wall. The floor on which the dung is heaped should, if possible, be paved with flat stones, and there should be a little inclination from each side towards the centre, in which there should be drains, connected with a small well, furnished with a pump, by which any fluid matter may be collected for the use of the land. It too often happens that a dense mucilaginous and extractive fluid is suffered to drain away from the dunghill so as to be entirely lost to the farm."

The urine of animals is one of the most valuable manures that can be applied to land; but it should be applied in a recent state, as a great portion of the soluble animal matter it contains is destroyed during the process of putrefaction. If unmixed with solid matter, it should always be diluted with water, as in its pure state it contains more animal matter than can be safely absorbed for the nourishment of plants.

According to some writers and practical farmers†, the value of the urine of cattle, if properly preserved and applied to the purposes of vegetation, is greater than that of all the dung which the same animals would

* Vide Complete Farmer, p. 173.

* Vide Davy's Agricultural Chemistry, republished in the Farmer's Register.

† Vide Complete Farmer, p. 175—177.

yield. A letter from Charles Alexander, near Peebles, in Scotland, addressed to Sir John Sinclair, in 1812, contains much valuable information on this subject. "This intelligent farmer had long been impressed with the great importance of the urine of cattle as a manure, and he set about to discover, by a long and well-conducted series of experiments, the best method of collecting and applying it. He began by digging a pit contiguous to the feeding stable, but distinct altogether from that which was appropriated for the reception of the dung. The dimensions of this pit were thirty-six feet square, and four feet deep, surrounded on all sides by a wall, and the solid contents were one hundred and ninety-two yards. Having selected the nearest spot where he could find loamy earth—and this he always took from the surface of some field under cultivation—he proceeded to fill it, and found that, with three men and ten horses, he could easily accomplish twenty-eight cubic yards a day; and the whole expense of transporting the earth did not exceed twenty-two dollars. When the work was complete, he levelled the surface of the heap in a line with the sewer which conducted the urine from the interior of the building, on purpose that it might be distributed with regularity, and might saturate the whole from top to bottom. The quantity conveyed to it, he estimated at about eight hundred gallons. The urine was supplied by fourteen cattle, kept there for five months on fodder and turneps. The contents of the pit produced two hundred and eighty-eight loads, allowing two cubic yards to be taken out in three carts; and he spread forty of these on each acre, so that this urine in five months produced a compost sufficient for the fertilization of seven acres of land. He states farther, that he had tried this experiment for ten years, and had used indiscriminately in the same field either the rotted cow-dung or the saturated earth; and in all stages of the crop he had never been able to find any perceptible difference. But what is still more wonderful, he found his compost lasted in its effects as many years as his best manures; and he therefore boldly avers that a load of each is of equivalent value. Mr. Robert Smith, of Baltimore, has his stables constructed in such a manner that all the liquid discharges of his cattle are conducted, together with the wash of the barn yard, into a cistern, pumped into a hogshead, and applied in a liquid state to the soil which it is wished to manure. This mode of making use of this substance, is likewise recommended in the Code of Agriculture:—"The advantages of irrigating grass lands with cow urine almost exceed belief. Mr. Harley, of Glasgow, (who keeps a large dairy in that town,) by using cow urine, cuts some small fields of grass six times, and the average of each cutting is fifteen inches in length. There are disadvantages, however, connected with this mode of applying this powerful manure. It must be applied soon after it is formed, or oftentimes the putrefactive process will commence and deprive it of part of its efficacy. And, as urine is of a scorching quality, it is unsafe to apply it to growing crops in great heat or drought. Hence it is unadvisable to use it except for grass, after the month of April and May, unless diluted. It is particularly useful in the spring, when the application of liquid manure gives a new impetus to the plant, and makes its growth more vigorous. This manure forces newly planted cabbages in a most remarkable manner."

In addition to pastures, pens, especially for fattening hogs, will be required, and upon the construction of these with reference to securing the double objects of convenience and economy, great attention should be paid. Many of the styes, even on extensive and otherwise well provided farms, are miserable structures, ill adapted to the comforts of their inmates and the purposes proposed by their erection. Mowbray, while writing on the conveniences for swine, remarks:*—"Room and ventilation are objects of the greatest importance, where numbers are kept, and dry lodgings, without which essentials success must not be expected. Nor are swine, in whatever state, proof against excessive cold, for I have known instances of their being frozen to death in their sty, and have always remarked, that severe weather materially checks their thriving, unless they be sufficiently defended from the chilling effects of the air. The sty, situated upon a dry foundation, as well as sheltered above, should be paved at bottom, to the end that it may be kept clean and dry, the operation for which should be daily performed; for although pigs will wallow in the mire, they are yet more thrifty in clean lodgings. As swine, confined, usually employ their leisure time in demolishing with their teeth the wood work within their reach, the modern cast iron troughs are preferable; at any rate wooden troughs ought to be iron bound." "The pigging house should be warm and dry, and secure from the inroads of foxes and other vermin, which have been known to steal sucking pigs from the sleeping or absent sow. Short straw is preferable for a bed, but in not too great quantity, lest the pigs be smothered beneath it; this should be renewed, with due regard to cleanliness; and, as the unwieldy sow is apt to crush her young against the

* Mowbray on Poultry, &c., p. 163.

wall, it is proposed in the New Farmer's Calendar, to append an inclining or projecting rail around, beneath which the pigs may escape on the down lying of the sow." In the Complete Farmer,* we find the following observations:—"Swine should not be kept in close and filthy pens. Though they wallow in the mire, their object is coolness, not nastiness, and they thrive faster and enjoy better health when allowed clean and dry lodgings than when they are not thus accommodated. The late Judge Peters, of Pennsylvania, in an article entitled, 'Notices for a Young Farmer,' &c., observes, 'In airy, roomy, and moderately warm pens, paved and boarded, and often cleaned, they are healthy and thriving. They show a disposition to be cleanly, however otherwise it is supposed, and always leave their excrementitious matter in a part of the pen distinct from that in which they lie down. No animal will thrive unless it be kept clean.'"

The following Dialogue is from the pen of the author who furnished those published in our previous numbers. We take it from the "*Cabinet of Agricultural Knowledge.*"

We are happy to announce that the author of those interesting dialogues is about to publish them in book form revised and enlarged. The book will be a valuable one in every farmer's family.

Dialogue between a Father and Son.

LUCERNE—MANNERS, CUSTOMS, &c.

Frank.—Father, you said you would tell me more about the Island of Jersey—since then, I have seen an account of the growth and produce of Lucerne—a crop which you say grows there—which is truly astonishing. I find that it yields four crops for hay during the summer, and after that, abundance of feed for cows and sheep. Is it a species of meadow grass or clover?

Father.—It is much like a narrow leaved clover, but the blossom is very unlike, being of a beautiful blue colour. The growth and produce is, as you say, truly astonishing; and having had repeated opportunity to make myself acquainted with the crop in every stage of its growth, from its cultivation, I am able to speak very decidedly to its great superiority over every other, provided the soil be suitable, and the culture well attended to. The crops to which I allude were so remarkably productive, and I had such constant access to them, that I was induced every evening to enter into a journal, whatever had transpired during the day, worthy of observation; but for this circumstance, it would be out of my power, at this distance of time, to speak so decidedly as to their rapid growth and large yield: I have now, however, an opportunity to quote *chapter and verse* from this journal, which I will do, for your information.

The Rev. Mr. P. having a field of an acre and a quarter, which had been suffered to run to weeds and bushes, determined to clean it, and seed it with Lucerne; he had it therefore trenched with the spade, to the depth of the staple of the land, which was in some places very shallow, the substratum being a hard gravel. By this operation, the richest part, or surface soil, was turned down on the gravel, and the subsoil was brought to the surface, to be enriched by future dressings. The work was done for fifty cents per perch, of twenty-two feet square, and the seed was sown broadcast and harrowed in by hand. On the appearance of the plants, they were not supposed thick enough to form a crop, but by careful management the field has produced immense crops, both of green food and of hay. The journal commences, with

FIELD NO. I.

September 13*th.* Mr. P.'s field of Lucerne, measuring one acre and a quarter, after soiling two horses and a cow during the whole of the summer, has already given three crops of hay, on that part of the field which has not been cut for soiling, to the estimated quantity of five tons. The fourth crop now growing, measures two feet in height.

Sept. 21*st.* The fourth crop of Lucerne mown this day for hay.

Sept. 24*th.* The hay carried in excellent condition: the weather having been dry and hot, the only preparation requisite was, to turn the crop once only; this crop is equal to any of the preceding cuttings.

Sept. 26*th.* A portion of the field, from whence gravel had been dug, and the part levelled, has always dried up after producing one crop of hay in the summer, the substratum being impenetrable: that spot has been this day covered to the depth of five inches, with fresh earth, preparatory to trenching and re-sowing.

Oct. 18*th.* The trenching of the gravelly spot has been delayed, but the shoots of the Lucerne have penetrated the earth through a space of five inches, and it is now determined to allow it to remain untrenched.

Nov. 23*rd.* A fifth crop will not come to sufficient maturity for hay, but there is excellent food for horses and cattle.

April 8*th.* The gravelly spot is the best and earliest part of the field; scarcely an inch in space, without a vigorous shoot of Lucerne.

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* Page 164.

May 6th. Commenced mowing the crop of Lucerne for soiling, a remarkably heavy crop, more than two feet in height.

11th. The first crop mown for hay this day. A space six feet square, taken as a fair average of the field, yielded twenty-three pounds in weight as soon as cut; after one day's exposure it had lost eight pounds in weight, showing that a gallon of water had evaporated in twenty-four hours from this small quantity of green food.*

23d. The hay carried in good condition—not injured by five rainy days, the crop lying light, by means of its large stalks, requiring only careful turning now and then.

26th June. A second crop mown for hay, measuring two feet eight inches in height. The weather has been remarkably hot and dry, the result has been, a growth in the crop of two inches in height every twenty-four hours, the last four days.

July 17th. The third crop of Lucerne measures seventeen inches in height: the weather is extremely hot and dry, all the meadows are parched, and farmers are compelled to feed their cattle on hay; the Lucerne grows away as if it had a shower every night.

22nd. The crop on the gravelly side has again failed; a first and second crop come earlier and grows more vigorously on this part of the field than on any other; but after that, it suffers for want of a depth of soil, affording a familiar illustration of the parable of the sower, (Matth. xii. 5th and 6th verses.) The seed which fell on stony ground immediately sprang up, because it had not much depth of earth, and consequently soon felt the influence of the sun, but when the sun was in full vigor, it was parched, and for want of nourishment, withered away.

Aug. 7th. The third crop of Lucerne mown this day for hay; a very heavy crop, many of the plants in blossom. From the first to the second mowing, one month and fifteen days; from the second to the third cutting, one month and eleven days; after this the field was rented to a tenant for £30 sterling per annum.

FIELD NO. II.

Sept. 5th. A piece of land was sown this day with Lucerne seed of this summer's growth unaccompanied with any crop.

March 20th. The Lucerne sown on the 5th of last September, with seed of that summer's growth, has stood the severity of the winter, and the crop measures six inches in height this day.

May 4th. Cut the first crop of Lucerne this day, two feet in height.

June 14th. A second crop mown this day, equal to the first.

July 14th. The third crop mown this day, twenty-six inches in height.

August 24th. The fourth crop mown this day, equal to any of the preceding.

Sept. 5th. It was on this day last year that this crop was sown with seed of that summer's production: the fifth crop from which measures a foot in height this day.

FIELD NO. III.

Major T. sowed a field with Lucerne, in May of last year, unaccompanied with any crop; three heavy cuttings were taken for soiling during the summer, and on the fourth of May of the present year, it was mown for hay, a very heavy crop: thus giving four crops in the space of one year from the time of sowing the seed.

FIELD NO. IV.

Colonel T. has a field of Lucerne, of four acres, in full vigor; the crop, after cutting, measured three feet, seven inches, in length. He mowed a third crop for hay from this field on the 21st of July.

FIELD NO. V.

M. A. Esq. In breaking up an old unproductive meadow, for the purpose of seeding it with Lucerne, adopted the following mode. In September, the land was ploughed to the full depth of the soil, and sowed with winter tares, or vetches: these were cut for hay in May, and yielded three tons per acre. The land was immediately ploughed and repeatedly harrowed, and the weeds were collected and burnt: a plentiful crop of seed weeds soon made their appearance, which were ploughed down; the land was again harrowed, and the weeds were again collected and burnt: this was repeated, until the soil was as clean as a garden, when it had a very thick coat of well rotted stable dung, which was very carefully turned in, and Lucerne seed was sown in September, without any other crop; and during the next summer, it was cut five times, either for soiling or for hay: the fifth crop, for soiling, was commenced cutting on the 25th September.

So far the journal, which needs no comment.

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Observations on the Manners and Customs of the Island.

Frank.—I have heard that the Island is very small, not more than forty miles in circumference, and about six miles across from north to south—in fact not much larger in proportion than Captain Price's sloop's quarter deck, of which he used to boast, being *three steps and overboard!* but if such crops

* Twelve tons, eight hundred and fifty pounds per acre.

as these can be obtained, the size is not of much importance.

Father.—The Island is very small, but it abounds in remarkable incident. It is a sort of Republic, being governed by a chief magistrate, by the title of Lieutenant Baillie, who is appointed by the crown of England; and twelve jurats or magistrates, chosen by the people from amongst themselves—the chief magistrate having only a single vote. A throne and canopy are erected in the *Royal Court*, as it is called, on which the Lieutenant Baillie is seated, and the twelve jurats in scarlet robes, range six on each side, on an elevated platform.

A military governor is appointed by the crown, who is commander of the forces, it being a strong garrison: he has also a seat in the court, but no vote on any occasion, and, to show his inferiority, he sits on the right hand of the Lieutenant Baillie, on a throne somewhat less elevated. The court frames laws for the jurisdiction of the Island, from whence there is only one appeal, and that is, to the *King or Queen in Council.* There is perfect freedom from taxation, and every article imported for the use of the inhabitants, is duty free: the duty remitted on tea, amounting to about ninety-eight per cent., and on tobacco about *six hundred per cent.!* Foreign spirits, however, is charged by common consent, with one shilling (25 cents) per gallon on importation, as a duty; the sum which this brings, about six thousand pounds sterling per annum, is faithfully expended in repairing and improving the wharfs and harbours of the Island—the government being supported by fees of court—a custom there is, of charging all purchasers at auction, with two cents each lot that is sold; these are called *God's pence*, and they are religiously devoted to the relief of the poor, who are always foreigners—a Jerseyman would sooner die than accept relief in the shape of public charity.

It has an Admiralty, as well as a civil and criminal court. All the estates in the Island are entered and described in a sort of doomsday book, deposited in court and are valued at so many quarters of wheat each, instead of pounds sterling or dollars; this being the ancient Norman law, in the time of Rolla: and if a person has an estate to dispose of, he takes the person wishing to purchase, to the court, and introduces him as such; the proper officer then turns to the description of the estate in the book, and declares whether there be any mortgage upon it, &c. and after the seller has fixed the price which the purchaser is to give, all the rest of the business is left to the court, who furnish title, receive the purchase money, and enter all proceedings in the *Book of remembrance*—so there are no disputed titles. A strange law there is, if a son sees that his father, through age or infirmity, is no longer capable of managing his affairs, he has the right to take him before the court for examination: and if he be found incapable, the court places what is termed a father over him, to take care of him. They tell of a young man, who complained before the court, that his father had lost his memory—that he could not remember *any thing*. "Not remember!" said his father, "I shall never *forget* the cruelty with which you have treated me!" *and they drove the son from their presence.* The criminal laws are very lenient. There is a saying, "a man must have strong friends to get hanged"—a punishment which has scarcely been known to be inflicted for the last age: for forgery the punishment is the loss of an ear and banishment—to England! The post of public executioner is so odious that no Jerseyman has ever been known to fill it: the office falls to the lot of some foreigner—perhaps a culprit himself, who is never permitted to associate with any one of respectable standing in society.

The labours of his office are chiefly confined to whipping criminals, sentenced by the court, who are always from amongst foreigners, with which the Island abounds: no fear of Jerseymen being found delinquent, they are proverbially sober, honest and industrious, especially the women. A curious story is told of a former *Jack Ketch*, as the executioner is called: he was called upon, in the way of his duty, to flog a house-breaker, who was tied to the whipping-post, all ready for action, when Jack said to the magistrate, "Now I won't flog this fellow unless you'll give me a new suit of clothes;" the magistrate refused, saying, he had already received his yearly allowance of a new suit. "You won't?" said Jack, "then flog him yourself," and threw down the whip! and the magistrate was compelled to comply, for no one could be found who would put the law into execution.

This same Jack Ketch, with his wife, were afterwards detected in a burglary, and were sentenced to be flogged, but as no one would condescend to do it, they were ordered to flog one another! Jack began and cut Mrs. Ketch so severely, that she was not able to perform her share of the operation—they were then transported to France, but she took a dreadful revenge, for on that very night, she arose, and while her husband slept, she cut his throat! But the most curious are the bankrupt laws. It is necessary to premise, that by law, any creditor is at liberty, and as often as he chooses, to call his debtor before the court, and request to have him and his books examined, to ascertain if he have

enough property to pay his debts, and persons neglecting to do this, are sometimes placed in most singular circumstances; for supposing a man becomes unable to pay his debts, and declares his insolvency before the court, they immediately collect all the debts that are due to him, and summon his creditors to meet him at court, when the oldest *creditor* is asked, "Will you take all the property this man has (mentioning the sum) and pay all his debts?" If he finds that the man owes more than he is worth, he, of course, declines, when immediately he is struck from the list of creditors, and can never more come against the bankrupt for payment of any part of his debt. Then the next oldest creditor is asked the same question, and if, for the same cause, he also refuses, he is also struck off, and is forever incapacitated from making any future demand for payment. The next oldest creditor may find that the bankrupt has now more than the amount of his debts, and therefore, consents, putting money into his own pocket by the transaction! On expressing my astonishment at the injustice of this law, I was answered, "It is not unjust, for these creditors were bound to examine the man's affairs, and to see if he were able to pay his debts; by neglecting to do so, they gave the other creditors reason to believe that all was safe, supposing that they, who had so long known and trusted him, were satisfied of his solvency; they must, therefore, take the consequence, for they knew the law. Many foreigners feel themselves much aggrieved by another law, which is sometimes enforced. If any one rents a house of a Jerseyman, the rent to be paid quarterly, the landlord has a right immediately to cause an inventory of all his furniture to be made, which he holds as a security for the rent, which is not due until that day three months! and when the amount of rent is paid, he may, that instant, have another made, as security for the next quarter's rent, and during that time the tenant must not remove a single article from the premises; if he does, he is liable to be prosecuted for theft.

But the most unjust and unnatural law is, the right of *primogeniture*, (the right of the first born son) which reigns here in all its horrors! The owner of landed property cannot "will" that it shall be shared at his death, by all his children alike, even if he have accumulated it by his own individual exertions; but the law takes possession, and the court accords to the *first born son* (not daughter) the best house and lands sufficient to enable him to occupy it, if it consist of land; or any other property they might think fit: and when the daughters are called to receive the portions which the court have allotted them, the *oldest son* shares again with them, to the injury, and sometimes the impoverishment of all the other children, male and female!

Frank.—Now that is scandalously unjust—and I would not live in such a country for the world, free as it is from taxes. Is the Island free from tythes? of the evils of which we hear so much in England.

Father.—There are tythes, but as the crops which are tytheable are enumerated by name in their old law books, and as potatoes, turneps and some other crops, do not appear amongst them, for they were not known at that time, they are supposed to be free from tythe; how far the *letter* will be able to do away with the *spirit* of the law of tythe, I do not know. The Episcopal clergyman of each parish has a right to demand from every inhabitant a yearly sum, whether he come to church or not, but as that sum is only two and a half pence,—five cents—*for which he is bound to furnish him with a seat at the church*, there is no great harm in it; after this, all sects are tolerated. The women are the greatest knitters in the world, and you will scarcely meet one, without the *needles*, within doors or without; even going to market with baskets with articles for sale, they contrive to carry it on, either by poising the basket on the head, or tying it round the body with a handkerchief; while those who enjoy the luxury of riding to market in the cart, knit all the way; and when they go collecting weeds from the sea, the *knitting goes too.* During the winter evenings, they have what they call *knitting schools*, at their own houses; and at the place appointed the best room is fitted up for the occasion, the floor being strewed with rushes, and lighted with lamps hung from the ceiling; and here the girls come, and knit for life, until ten o'clock, when the young men come to accompany them home, and the girl who is most expert at the work, is frequently sure to get the first husband; it is said that upon some occasions, a man's stocking has been begun and finished the same evening. Many of these girls have a singular *propensity*, which is to spend every cent they can save—and they will work hard for it too—in the purchase of cloth, with which to make shirts for their *hoped for husbands*, years before the time when they expect to meet with them; and some have been known to have hoarded up against that time, many dozens of those *indispensables*, as a marriage portion to their intended lords, without regard to size or length; so that, instead of cutting the garments according to their husbands, they must cut their husbands according to their shirts! and I have known a servant girl, who, speaking of one of her young friends, about to be married, remarked, "why she has but three dozen shirts in the

world, and yet talk of marrying!" but these are the marriages that are sure to wear well; I never heard of a divorce or separation, during the time I resided amongst them; and there too, they still religiously observe, the beautiful ancient custom of breaking a coin, or some article of gold or silver between them, when they betroth themselves; and it is said, there is not an instance upon record, where either party proved faithless to the sacred vow!

For the Farmers' Cabinet.

Nitrate of Soda as a Manure.

In the last number of the Cabinet there is a paper from the Farmers' Magazine, stating the mode of application and uses of this article as a manure, all of which has been verified by the writer of this, last season, though he had not then heard of its application to agricultural purposes either in Europe or this country. It costs from three to four cents per pound by the sack, and is much cheaper than saltpetre. It should be sown early in the spring on the grass sod at the rate of about one hundred pounds to the acre, and perhaps a heavier dose might answer better, but experiment must determine that point.

The nitrate of soda, or cubic nitre as it is often called, can be purchased in quantities of the wholesale druggists. It exists naturally, in inexhaustible quantities, in the desert of Atacama in Peru, South America, from whence it is imported into this country, and is used for various chemical purposes. It forms a bed of variable thickness, covered with clay, of one hundred and fifty miles in extent. This article in the crude state in which it is imported into this country, is in dirty-white, saline lumps, rather soft and friable, and damp on the surface. It attracts moisture from the air, and dissolves very readily by exposure to rain.

From present appearances, it seems probable that this substance will soon be found to be of great importance to the farmer as a manure, and the ease with which it can be transported will be a means of extending its benefits; and the greater the consumption of it, the cheaper it will become, as it will then become an object of commerce on a large scale.

If a number of farmers in different sections of our country would make an experiment the coming spring with the nitrate of soda, and communicate the results for publication in the Cabinet, great good might arise from it, and for the encouragement of those who are disposed to try it, the writer of this can vouch for its efficacy in promoting the growth of grass. It would be well to try the effect of it on corn, applied in small quantities on the hill, and also on potatoes.

The introduction of new manures which admit of easy transportation to distant places at a cheap rate, are invaluable to the agriculturist, and ought to be sought after, and brought into notice by all who desire the prosperity of our country.

A.

For the Farmers' Cabinet.

Land Measure.

Whatever you do, do it *well*, not well enough.

I was much pleased with an article headed "A Useful Hint," at page 194, of the last number of the Cabinet, pointing out an easy and simple method of laying out land, so as to enable the farmer to apply lime or any kind of manure evenly at a given rate per acre: this is a very important matter, and many persons for want of a species of knowledge which they do not possess, have made sad work in the application of various kinds of manure, and more particularly lime; sometimes spreading it thicker, and at others thiner than was intended.

This has induced me to point out another method, which some may think less troublesome than that refered to. Lay the land in spaces each way of twenty-two yards or four poles wide. This will form it into squares, each of which will contain the tenth part of an acre or sixteen square perches, and five bushels of lime applied to each of these squares will be fifty bushels to the acre, which is a pretty fair liming, though some apply more, and many less than this quantity; four bushels to the square will be forty to the acre; six bushels to the square, sixty to the acre, &c., and in this way any given quantity may be evenly spread over a field. There should be no *guessing* in matters of this kind, and your boys noticing your care and circumspection in such matters, will come to regard them as things of consequence, which they really are, and it will be a means of inducing habits of accuracy and care, which will be of great consequence to them when they come to act for themselves.

Teach your boys by example, as well as by precept.

C.

For the Farmers' Cabinet.

Poultry.

"Dear me! what a price eggs sell for."

Every person who is familiar with the habits of fowls must have noticed their fondness for animal food. Animal garbage, insects, slugs, and worms are sought for and devoured by them with great avidity. During our long winter season they are prevented by the frost from procuring a supply of animal food, and by many this is supposed to be the cause of their ceasing to furnish us with the usual supply of eggs. Some managing house-keepers, who

know that eggs always bring a good price during the season of frost, boil bran or shorts in pot-liquor, in which meat has been cooked, and which has imparted to it the animal juices, with which they feed their hens, and it is unquestionable that they derive a great advantage from it. Corn and oats parched or browned in a pot over the fire is a kind of food that poultry are very fond of, as well as boiled grain of any kind, and an occasional change of food is found by long experience and observation to be highly important in promoting the health and thrift of domestic animals of every kind. Keep your fowls *dry* and *clean*, give them *good lodging*, provide them with some dry dirt, ashes or old slacked lime to rub themselves in, and give them a plentiful supply of food, a portion of which should be animal, and you will not have to complain for their not thriving or laying eggs.

SUSAN.

For the Farmers' Cabinet.

Improve the Soil—and go Ahead.

No farmer "goes ahead" unless he raises an abundance of grass. Where there is but little grass there is always a short purse, said a man of extensive observation and great experience; the reason of this must be so obvious as scarcely to need an explanation; for of grass comes manure, and manure is the philosophers' stone, which turns every thing into gold, provided it is well husbanded and judiciously applied to the soil. The experiment of trying to raise profitable crops on worn-out lands without manure has been made thousands of times and always resulted in the same way; it is therefore unnecessary to repeat it again, for disappointment and shame will always attend it. But, says the man of the poor farm, how am I to help repeating this everlasting abortive experiment? Why, in the way you help doing any thing else which you know to be wrong; *by not doing it.* Well, how am I to live if I don't go on in the old way? Go to work in earnest, determine to reform and do better; instead of spreading your manure over fifteen or twenty acres; cultivate but one-third or one-half the quantity of land; go just as far as you can to do justice to the soil and to yourself, and no further; don't go one inch beyond, make your land *feel* the effect of the manure; don't tantalize it with a mere smell of it. What would you think of a neighbour inviting you to dine and when the time arrived you were only permitted to smell the good things, but obliged to keep hands off. You would think he was a stingy mean fellow, and you would not go into that trap again I'll vouch for it. Now if your old worn-out fields could talk and tell what they think of their owners, vociferate their griefs, what a tale of woe would they not develope! It might be something on this wise. That mean, stingy, stupid old fellow has been scratching over me these forty years and more, and though providence has always benevolently furnished me with plenty of drink of the purest and best kind, yet have I never had a *full meal* during somewheres near half a century, and for more than four-fifths of that time I have been left to snuff the air and shift for myself, without any sustenance being offered me, and yet it is expected of me to produce crops equal to what I rendered in the days of my youth, when my belly was full of meat and my bones full of marrow. Vain expectation! it is nearly over with me unless help comes from the dunghill or some other quarter. This everlasting scratching my hide may go on to all eternity with still less and less success, till my owners and all their worthless, lazy progeny to the seventh generation, may be starved out of house and home, unless an adequate quantity of good, wholesome, nutritious food be furnished me to resuscitate and invigorate my exhausted system, and to enable me to put on my *green mantle* as I was wont to do in my earlier and better days.

Farm *poor* land *poorly*, and *poverty* will be your lot whatever your name may be, but manure the soil, enrich it, farm it well, and keep it in a regular advance of improvement by raising an abundance of grass, and prosperity will smile upon you and yours if so be you are virtuous.

WEST.

For the Farmers' Cabinet.

On Planting Forest Trees for Fencing.

"Aye be sticking in a tree, it will grow while you are sleeping."

In many parts of the old settlements of this country, timber for fencing has become scarce and costly, as those farmers who have it to purchase for current use can testify. There are farms divided into small enclosures by cedar or chestnut rails, where the value of the fence bears a large proportion to the whole value of the property; and some years since my attention was called to a farm of about one hundred acres, which was fenced in an extraordinary manner with cedar, which on examination was found to have sold for less than the fence would have sold for separately. There is always more or less wood land on farms, but in most instances by cutting out, or from other causes, there are many *bald places* or *blanks*, which produce nothing of value either for the present, or expectation for the future; and on most farms there are spaces not adapted to cultivation, which remain *blank*, producing nothing. Now I desire to turn the attention of the readers of the Cabinet to these blanks in their farms, if so be

that they may be rendered profitable to themselves and those who may succeed them. Suppose a few quarts of chestnuts were deposited in proper situations in these blank places, an inch or two below the surface of the ground, at a proper season of the year, (which I should say would be at the time they were ripe in the autumn,) what do you think would be the result? Would they not grow up and become trees, and make rails or posts that would be worth ten or twelve cents a piece? Aye, that's what they would, and that without any further labor or attention on your part. I have often thought that if boys would plant some of their chestnuts instead of eating or selling them, they would gain more by it in the end. There are thousands of acres of land which have had all the marrow taken out of them by ignorant and conceited people; I will not call them farmers, because they are a disgrace to the profession, which it would be much better to plant with chestnuts or some other valuable description of trees, than to attempt to keep it under that species of wretched cultivation which will sooner or later bring its occupant within the confines of the county poor house.

In Scotland and other parts of Great Britain, but particularly the former, the business of planting forest trees has been prosecuted to a great extent for a long period of time, and the profits arising from it have been very great to the proprietors. The planting of course has been on grounds not adapted to profitable cultivation of grass or grain crops. Those who engage in this business either have nurseries where they bring forward the young trees, or they purchase them at a low rate from nurserymen who cultivate them for sale to planters.

"The value of the planted woods of Darnaway in Scotland in 1830, was £130,000 sterling (about $600,000.) The annual increase in growth of oak and fir, exceeds, in a threefold ratio, the amount of timber thinned or cut out every year; and as the system pursued is, for every fir that is cut down to plant two oaks, in the course of fifty years the whole forest of Darnaway will be one mass of oak. The total number of trees planted in this forest in forty-three years, was 12,187,550, viz.

Oak, - - - -	1,114,260
Scotch Fir, - - -	10,346,000
Ash, Elm, Beech, &c. -	728,290

Since the spring of 1829, there has been planted in it 911,000 oaks."

The above exhibits the planting of timber trees on a grand scale, and there are many others in Scotland that fall but little below it; and it is said to be attended with large and profitable annual returns, for the business of cutting out and replanting is constantly going on.

It is not expected, neither do our situation and circumstances require that we should, at least in the present generation, go to work and plant whole forests, but the destructive propensities of the people of this country have been such in regard to timber trees, that we are already beginning to feel the effects of our folly in the neighbourhood of our houses, when obliged to buy materials for fencing, and the sooner we retrace our steps the better: I would therefore propose to make a commencement by planting of chestnut or other valuable trees in vacant spaces in wood lands, or in situations where profitable cultivation cannot be carried on. The expense will be small, and the profit, I suspect, will not fall below that derived from the raising of multicaulis trees.

AGRICOLA.

For the Farmers' Cabinet.

Three Millions of Dollars saved to Pennsylvania.

"A penny saved is two pence earned."

Assuming that one-half the population of the state of Pennsylvania belong to the class of Agriculturists, and that on an average each family is composed of six persons, we arrive at the conclusion that there are *one hundred and fifty thousand* farmers with their families carrying on the great business of producing food for man and beast, within the boundaries of the commonwealth. Now if any plan can be suggested by which each of these families can either save or produce twenty dollars a year more than heretofore, it will make an aggregate amount of three millions of dollars per annum, added to the wealth of the agricultural comniunity alone; and this sum would pay the interest on the state debt, and liquidate the principal in a few years. Every farmer who will introduce water into his barnyard by means of a pump, cistern, or by directing a small rill of water into a trough for the purpose of furnishing a regular supply of water for his stock during the winter season, to obviate the necessity of permitting the animals to wander forth in search of drink, and by that means wasting their manure, will certainly save more than ten dollars worth of the most valuable article that is to be found on a farm annually. Sam Slick would say, "that's a fact;" for animals always make their dejections most copiously immediately after drinking, and being driven. Well then, there we have a million and a half of dollars saved already, for one hundred and fifty thousand multiplied by ten, makes that sum. But perhaps it may be said that it is only made on paper; well, so be it, but now let every

farmer set to and make it on his farm, which will not be an affair of any great difficulty, if he has the least modicum of ingenuity or industry, for every body knows how to dig a well, make a cistern, or dig a ditch.

One-half of the job with which we set out being now accomplished, let us see if we cannot make another million and a half of dollars with equal ease, for an old man of my acquaintance used to say, that when a work was once begun it was half done. So here goes for the balance. A number of farmers, of late years, having grown wiser as they have grown older, have procured large boilers and had them properly enclosed in brick work or masonry, in which to boil or cook the corn and other grain fed to their hogs and cattle, instead of having it ground or fed whole; and the uniform testimony of those who have adopted this plan is, that there is great economy in it, and some think they save one-half their grain by cooking it before it is fed, and that it keeps the animals in better condition. One small farmer thinks that he saves more than twenty dollars a season by following out this practice. Now I put it down that each farmer in the state will save ten dollars by acting rationally, and for his own interest in this particular. This makes exactly one million and a half more, and the two sums added together, makes the enormous amount of *three millions of dollars per annum*, to be saved by the farmers of Pennsylvania alone; a pretty sum this, and well worth looking after in these hard times. What the amount would be if extended to the whole United States, I have not yet had time to calculate, but it would be astonishing no doubt; and if what I have written should be acceptable to your readers, and they should generally adopt the suggestions, after the next census of the United States is taken, which will be during the current year, perhaps I may drop you an estimate for the whole Union; so in the meantime I bid adieu.

AGRICOLA.

January 5, 1840.

For the Farmers' Cabinet.

Boilers.

In some former numbers of the Farmers' Cabinet I have read essays on the subject of the advantages of boiling grain and roots for stock, which arrested my attention and induced me to examine some of the boilers which are in operation, and I find that they far exceed the expectation formed of them. Those who have erected them in a *proper* manner, and have brought them into use for cooking corn, oats and potatoes for hogs and cattle, would not be willing to part with them for three times their original cost. A farmer who has had one in use for some years, says that he is now sure his stock gets the whole of the grain, and what is of great consequence, it is all thoroughly digested. There is now no going to mill and giving away ten per cent. of the grain, besides the otherwise unavoidable waste which some allege amounts to about four per cent. more. He says the feeding of cows with boiled oats is the most profitable application of it which he has ever made, for it puts marrow into their bones, and in the spring and summer the dairy maids draw it out in the shape of fine rich butter which always brings a good price since these piping days of steam-boats and rail-roads which have set the whole world a travelling. Some have erected expensive structures for steaming, but it seems now to be admitted that a *simple boiler*, set in a proper manner in brick work with a grate underneath to support the fuel is the cheapest and best plan hitherto adopted. The demand for these boilers having increased has induced the manufacturers of them to improve them, and also to sell them at a less price than was formerly given for them, and recently a friend of mine purchased one of great beauty and excellence, at a fair rate, at No. Market street, Philadelphia, just below Second, on the north side; Dilworth, I think, is the name of the seller; those sold there are lighter and handsomer than any castings of the kind I have seen, and come cheaper; Savery & Co., who are the founders, it is said, use the iron which is made at Lyman's furnace, Pottsville, with anthracite coal.

P.

For the Farmers' Cabinet.

Mechanics.

"Out of nothing—nothing comes."

The laws of nature, unlike human laws, can neither be changed nor evaded; and, for want of a proper knowledge of simple and unchangeable laws, many men waste time and money in trying to produce great effects by insufficient means.

The mechanical powers, as they are called, do not, and never can, create power—they only modify its application.

The power most easily measured is that of gravity, or weight: and it is the cheapest of all powers, or first movers, when, as in the case of a water-fall, nature constantly winds up the weight for us for nothing.

Suppose then we have one thousand pounds of water falling ten feet in a minute. No human contrivance can make that water raise more than its own weight to the height of ten feet in the same time. It cannot raise quite as much, for the friction of the machinery must waste part of the power; but, as it may be a small part, let us omit the friction from these calculations.

The effect of the mechanical powers is to enable us, while our original power remains the same, and the rate of its motion the same, to exert a greater power with a slower motion, or a lesser power with a quicker motion. But, in all such cases, the power produced multiplied by the speed with which it moves will be found to give the same product.

Thus one thousand pounds falling ten feet in a minute, may be made to raise ten thousand pounds one foot in a minute, or one hundred pounds one hundred feet in a minute, the same power being required in each case; but no man can make it do more, for if he did, he would create something out of nothing, which is contrary to a law of nature.

For this reason all attempts to make a mechanical perpetual motion have failed, and forever must fail; as such a machine would be equivalent to making a weight raise another equal to itself to the same height in the same time, and enough more to overcome the unavoidable friction of the machine, which friction, however small, is certain, sooner or later, to stop the motion, unless an additional power is applied sufficient to overcome the friction.

Therefore, every man who is trying to make a perpetual motion, or any machine which he expects to do more than the power applied to work it, is wasting his time and money in that which will be certain to end in disappointment. R.

For the Farmers' Cabinet.

Fruit Trees.

Spring will soon be round again, and that is the time for planting fruit trees. Every one desires to have plenty of good fruit, and yet how few resort to the proper means of obtaining it. Many rely on their more provident and industrious neighbours and friends for a supply of it. How many *friendly* and *neighbourly* visits are paid during the period that fruit is in season, that would have been deferred or entirely omitted, had there not been some excellent fruit in prospect. Strawberries, grapes, plums, peaches, apples, cherries, and pears, particularly if they be of a very superior quality, all afford most substantial reasons for visiting neighbour A., B. and C.

If there be no fruit, no visit need be expected for that season; but if it is very abundant and very good, look out for much company, for your *friends* will all remember you; there is no danger of being forgotten while it remains in season.

A very provident, careful, industrious personage who was celebrated for always having something very nice and good on hand during the season of fruits, and who had been rather intruded upon beyond the point of proper endurance, once observed that "those who never planted a fruit tree ought to make their visits few and far between until they had amended their practice and begun to reciprocate."

Now those who profess to have repented of their procrastination and neglect in the matter of setting out fruit trees, had better begin to demonstrate the sincerity of their repentance by some external and visible sign of amendment, and the approaching spring will furnish a fine opportunity of exhibiting their sincerity to their neighbours and friends.

Determine at once the number and kinds of trees you will set out, the spot where you will plant them, ascertain where you can obtain them, and make every necessary preparatory arrangement before the time of planting comes round, and let no ordinary circumstance prevent the performance of so important a duty to yourself, your family, and to posterity as that of planting a well selected assortment of the best fruit trees.

K.

For the Farmers' Cabinet.

Salmagundi.

Those who are sparing of grass seed, must be saving of their hay.

Winter is the proper season for thinking and contriving about the operations for spring and summer; true it is that many think and contrive but little, and the consequence is that they are brought up all standing.

Fifty or sixty years ago, farmers depended upon the spontaneous growth of the native grasses, and did not trouble their heads about hunting up clover, timothy, orchard grass, or herd grass seeds. The result was, they had but little pasture and less hay; they could keep but little stock, and made but little manure; their funds became more and more exhausted every year as their land become poorer, and by-and-by starvation and ruin began to stare them in the face, and frightened some of the more intelligent of our ancestors into better ways of working things.

Attention was turned to the artificial grasses; clover and other grass seeds were procured and sown, and what is more, they grew and flourished, and produced more than ten-fold the quantity of herbage which the same soil under the previous management was wont to produce. This enabled the farmer to keep more stock, to make more manure, to enrich his land, and to raise more and better crops of grain; and all this tended to put more money in the purse than was ever known before the introduction of artificial grasses. The result was, larger and

better barns were built, prodigious corn cribs were erected, such as were never known before those days; good and substantial houses, replete with every comfort, were seen to grow up all over the country, surrounded with every convenience that the most fastidious could desire.

But of prosperity was born extravagance; gigs, buggies and carriages were substituted for riding on horseback, or for going on shank's mare, which was the mode of locomotion in common use in the days of our great grandfathers, as tradition tells us. Instead of bread and milk, mush and milk, pie and milk, farmers' rice, boiled milk, &c. &c., with which we were daily treated, even in my day, came the everlasting slops, tea and coffee, and sugar, and chocolate, with their long train of nervous diseases, such as were never heard of in the days of my boyhood, and the existence of many of which may be very well questioned even now, otherwise than in the imagination.

The use of such an immense mass of foreign products all over our country, independent of the effect of many of them on our health and happiness, has brought poor old Uncle Sam and his tenantry into a pretty fix, which we had better all join together and relieve ourselves from as soon as possible; and the way to do it is just as plain as the way to market—buy less and sell more.

Only think of it now for a moment: During the year ending the 30th of September, 1839, there was imported into the United States from foreign countries, merchandise, (and a goodly quantity of it was tea, coffee and sugar) amounting to the enormous sum of - - - - - - $157,609,560

Exported to other countries from this, during the same time, - - - -	118,359,004
Leaving a balance against us in one year of - -	39,250,556

Of the articles exported $109,921,094 were domestic productions, and $17,408,000 were foreign articles.

Now don't you call this bad farming; but a thing once done can't be recalled, and it is not worth crying over spilt milk; but let us try not to spill it next time.

But how are we to pay this balance, which amounts to about two dollars and fifty cents for each man, woman and child, black and white, in the Union. The answer is, buy less and sell more, and the balance will soon be transferred to the other side of the ledger. The business of a whole nation works precisely on the same principle as the concerns of an individual do. He who spends more than he earns will soon be out at the little end of the horn.

But I must not forget that I began to write, not to tell you and your readers about political economy, but to impress farmers with the importance of procuring *plenty* of good, clean grass seed during the winter, so as to be ready at the earliest suitable period in the spring to sow it on their grain fields, and be sure and sow it bountifully, and of several kinds, so that there may be a full crop of it, for it has been truly said, that as we sow so shall we reap, and it is equally true of grass as of grain crops.

AMOS.

For the Farmers' Cabinet.

Plaster of Paris.

There have been many notions and opinions put forth at various times in regard to the mode of action of this article in promoting vegetation; some have supposed that it acted only as a stimulant, and others that it promoted the growth of plants exclusively by its attraction for moisture: But the better opinion seems now to prevail with the more intelligent observers of nature's operations, that it is a positive food for many descriptions of plants, particularly clover, and enters into their composition and structure. This has been ascertained beyond all doubt by chemical analysis. Sir H. Davy obtained from a quantity of clover a proportion of gypsum equal to about a bushel to the acre. This must have been taken up from the earth by the clover as a part of its food, and had it not existed in the earth from which the clover obtained its nutriment it would not have been in its composition.

Where it has been frequently sown it ceases to produce the same comparative effect, for there remains a portion of it in the soil, and the manure made on a farm where it has been freely applied always contains a considerable quantity of it, which is annually returned to the fields, where it renews its beneficial agency. This should not deter farmers from making their usual annual applications of this very useful and important food for plants, for doubtless a considerable quantity of it is dissolved and washed to a depth in the soil that the fibres of the roots are unable to take it up, therefore continue to apply plaster to your grass lands, for to it agriculture is perhaps more indebted for its improvements than to any other single cause.

B.

No one can change his mind to the injury of another.

Thou shalt govern many, if reason govern thee.

A poor freedom is better than a rich slavery.

Regard no man's opinion of what he does not understand.

For the Farmer's Cabinet.

Friend Libby:—

Some of my neighbours, who have farms on a calcareous soil, and who had intended to cultivate the Silesian Beet the coming season, have been alarmed at the information contained in a pamphlet, published by J. R. on the cultivation of that root; for he observes, "In France, calcareous soils are not considered suited for growing Beets." His attempt to distinguish between a chalk and a limestone soil, is futile, for if *calcareous matter* be the cause of the failure of the crops, it *matters not* of what particular species of formation it consists. He says, "The American farmer must not be deterred from *trying* to cultivate Beets on limestone land." What! after three years *trying*, is it come to this! And after having said, the material may be produced in immense abundance from Maine to Louisiana, and from the Seaboard to the Northern Mountains, are we still left to determine the fact by our own experience!

If J. R., "who arrives at no conclusions without deep research and close calculations," had first made himself acquainted with facts and their consequences, before he began to publish for the information of others, he would not thus have committed himself, and the cause, which he professes to uphold.

Without disparagement to the character which he has earned amongst his *townsmen*, I must be permitted to say, his observations ought not to pass for much in the *country*, for they cannot result from experience. I intend to cultivate, as I have done, the pure species on a calcareous soil, depending upon perfect success, if we are blessed with a fruitful season, for I mean to plough deep, plant thin, and keep clean—all that is necessary. —His observation is calculated to do infinite mischief to a cause which he professes to advocate, and is twin to the highly injudicious step, which he advertises he has taken, namely, to import the seed of the common Mangel Wurtzel, or "root of scarcity" with the seed of the pure Silesian Beet; to do which—if he had called to his aid his "deep research and close calculations"—he would have discovered, was to offer the greatest despite to the culture of the pure species, which—for his information—contains about ten times the quantity of saccharine matter, than is to be found in the "root of scarcity." But I may one day, through the present medium of communication, point out the reason why the *French sugar makers*—not the *Agriculturists*—find that Beets grown on a calcareous soil, are not adapted to the purpose of *making sugar*.

An Old Subscriber.

28th 1st Mo. 1840.

Teach by thine own example.

Cultivation of the Locust Tree.

To the Editor of the Farmers' Cabinet.

Dear Sir,—I obey your call in the number of the Cabinet just received, and proceed to give your correspondent, Mr. Hand, of Cape May, the result of my experience and observation on the cultivation of the Locust tree.

First, as to seed.—I have had them vegetate well, by soaking for about thirty-six hours previous to planting—throwing over boiling water, and keeping it lukewarm. The grain will swell to nearly double its original size. Soaking is absolutely necessary to insure an early growth, as it is the general impression that without it, at least three years is required for the seed to vegetate, and then there is no certainty of its growing; whereas by soaking, and planting before they dry, I have had them vegetate, and the plant two inches above ground in two months from the time of depositing it in the ground.

As to the best mode of planting, and the time.—I prefer planting in a nursery—to have the ground well pulverized—drills four feet apart and about an inch deep—the seed about two inches apart in the drills, which will insure a tree with considerable certainty every eight or ten inches—should the plants come up closer, they can readily be thinned with a hoe, or with a trowel taken up and transplanted. The best time for planting is as early in the spring as possible. I prefer the nursery, because the plants for the first year are more easily kept free of weeds, which is necessary, as I have discovered that the plant is easily smothered by weeds when small—because the plat of ground being small, is more likely to be well prepared for the seed, and to have a heavy dressing of ashes, lime or marl, one of which is absolutely necessary to insure a general growth of the seed in any soil; and without which, on a soil to which the growth of locust is not common, it will not vegetate at all.

The tree, if carefully taken up for transplanting at two years old, is stunted very little or not at all in its growth, and if carefully planted where it is to remain, not one in a hundred will die.

My advice to your correspondent would be, to adopt the nursery for raising the plants, and during the next two years, while the trees are maturing, to prepare his "ten acres of old worn out ground" for them when ready for transplanting. This he can do, (as his ground is already ploughed,) by giving it a heavy dressing of ashes or lime early in the spring, and then turning under green crops. I advise this course as I know that locust will not thrive in "old worn out grounds."

Should your correspondent, however, prefer depositing the seed in the field, where the trees are to remain, his next best plan will be, to give the ground a dressing of ashes, lime or marl early in the spring—strike out his field in squares ten feet apart, and then deposit four or six grains in each square, covering them about an inch, and sprinkling a handful of ashes over and around them. These hills can be thinned the following spring, and should any have missed, they can be supplied from those hills, when more than one grain has vegetated. In the course of eight or ten years every other tree might be cut down for fence stakes, fire wood, or perhaps the butt end used for board fence. I have had trees ten feet high in two years from the time of planting the seed.

I would again, sir, assure your correspondent, that unless he prepares his "worn out ground" by ashes or lime, it will be labour and time thrown away. We find this necessary in the valley of the Susquehanna on lands not worn out, and remarkably adapted to the growth of locust.

A. O. HIESTER.

Estherton Farm, near Harrisburg,
January 27th, 1840.

For the Farmers' Cabinet.

Small Comforts.

Women's work is never done, therefore you ought to lend a hand.

The Cabinet, and other agricultural periodicals, have made our men folks very learned on the subjects of manures, crops, short-horned cattle, sheep, swine, &c. We hear them often discussing these topics, and they really appear to derive benefit from it, for they seem to talk less of politics, and other everlasting subjects about which they could never come to any satisfactory conclusion, since agricultural papers have been generally introduced in our neighbourhood. But there are some matters that we women folks, who constitute a part, and we think no unimportant part of the agricultural community, are desirous should claim a share of the attention of the Editor of the Cabinet; just give us a page or two of your useful journal every month, in which to discuss such subjects as may more particularly appertain to our department of the duties of house-wifery as connected with agricultural life.

If you will agree to furnish us with the use of a chimney corner of the Cabinet for our *own* use, we will accept it with thanks; if not, we will have a paper of our *own* for our *own* use, edited by one of our *own* number, and then look out, and stand clear when the hot water begins to fly about your ears.*

I will now tell you some of the matters we want brought before the public, with the view of meliorating *our* condition, and promoting the interest and comfort of all concerned. You may call these SMALL COMFORTS, but of small things, great ones are composed; grains of sand make mountains, drops of water constitute the ocean, and little babies make men and women all the world over; no exception Mr. Editor. The great matters of agriculture are ably and amply discussed in your journal, but we want something said about our own wants and wishes.

A year or two ago you published a very good essay about a "wood house," for the convenience and comfort of females; it was much talked of, and every man in our neighbourhood, except an old bachelor, approved of it, and most of the men said they would build a receptacle for keeping the fuel dry forthwith; one even went so far as to get the stuff for it, but afterwards used it for another purpose, and to this day there has not been built a wood house in our township; so we have to burn wet wood, and go out in the rain and snow to get it; sometimes the breakfast or dinner is delayed beyond the usual time in consequence of the fuel being wet and green, and whenever this happens, we are sure to hear of it in the way of complaint, although the fault lays precisely where the complaint comes from. Baking, you know, can't be done right without dry wood, so we want you to write another essay about keeping wood in the dry, and having it cut and split to proper sizes for current family use. Many of us in our neighbourhood are bad off for water, and the men don't take it as much to heart as they ought to, or things would soon begin to mend. Carrying water a long distance is real work, and so is drawing it from the bottom of a deep well, and a tall pump don't work easy. A few of our neighbours have good large cisterns, with pumps in them, that save much time and labour; and besides, the fine soft rain water they contain is so good for washing, that I wish you would give us a lift in the Cabinet, so that every family may be furnished with one, even if it should be thought to be for our sakes alone. Now there is the milking, which you know must be done rain or shine,

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* We invite "Susan" to occupy a place in our columns every month; and would extend our invitation to other Ladies, who sustain the enviable relation of wives and daughters to the true nobility of the country, to take "Susan's" communication, or their own experience, for a text book, and forward to us their productions. We pledge more than the number of pages for which "Susan" asks, and should there be any want of room, we will publish an occasional extra as a less evil than that of being subjected to a sprinkling of "hot water," or entering into competition with our *Fair Friends.*

no matter how great the storm, or deep the mud or filth of the path, or barn yard, or stable; try to help us along a little in this important matter; the path might be paved or gravelled, one would think, without much expense or labour; and the stables, can't you teach our *dear masters* how they, as well as the cows, can be kept clean during the winter season. It is said cows give much more milk when they are kept tidy and clean, and I think it stands to reason that they should. If I was a cow I would'nt give a drop of milk unless I was kept neat and clean, and well fed in the bargain, for I hate these lazy, stingy fellows, that are always trying to cheat and get something for nothing: do give them a touch on these subjects, and if you do it handsomely, I will write to you again, and tell you a few more of our grievances, under which we have been long labouring to our great discomfiort, and the great injury of our constitutions. Susan.

For the Farmers' Cabinet.

Law.

Good lawyers are seldom engaged in litigation on their own account, and good doctors take but little medicine.

All farmers should know enough about law to keep out of it, or if they should become involved in it, to act understandingly and rationally, under the circumstances in which they may find themselves placed.

The principles of what is called common law always conform to sound reason and common sense, but statute law is often arbitrary in its provisions. Every intelligent agriculturist should become acquainted with the laws of the State in which he is located, so far as they have a bearing on his immediate interests or duties, not to enable him to become a competitor in litigation, but to instruct him in the means of performing his duties to his friends and neighbours, by giving his advice and assistance in cases that unavoidably arise in all communities. The laws which have relation to the poor, the roads, partition fences, county rates and levies, apprentices and strays, should be familiar to, and well understood by every landholder in the state. Those that have relation to the duties of executor, administrator, guardian and trustee, are of vast importance, and there are few persons of property or respectability but what are called upon at some period or other of their lives to act in some of these capacities; it is therefore of much consequence that some general knowledge at least of the laws on these subjects should be possessed by farmers generally; there will always be points of difficulty or intricacy arising where legal counsel will be indispensable, but still a knowledge of the general duties which are so easily acquired, should be possessed more generally than is at present the case. Every respectable farmer should be the proprietor of a digested copy of the laws of the State; it will add to his knowledge, and enable him to extend his usefulness, and it will be of incalculable advantage to his children, who as they grow up to manhood will be gradually acquiring a knowledge of the laws by which they are to be governed, without any severe study or loss of time from other occupations. If farmers generally possessed more knowledge of the laws on subjects of general interest, pettifogging lawyers would soon become a scarce article in the community; their food would be gone, and they would be obliged to seek some more honest calling for subsistence. This would be a great blessing to those on whom they at present prey, and would tend to promote the tranquillity and harmony of society.

The copying of deeds, mortgages, bonds, notes, leases and other legal forms as exercises when learning to write, would give boys much valuable information, and be as efficient in instructing them in the mechanical exercise of writing, as copying short sentences which give but little general information. The copying off of whole laws on important subjects would impress their provisions on the minds of school boys, so as to render them indelible, and might be of much service to them in after life.

If the effect of these suggestions should tend in the least degree to lead more of the youth of our country to aim at studying a profession, the writer would freely recall them, for *crowding* what are called "the learned professions," is an evil of great magnitude, which has *robbed* agriculture of many promising subjects, without adding any thing to the reputation of the bar.

A large proportion of the suits at law which crowd our courts of justice arise from unbridled passions, by which reason becomes unseated until the party is fairly embarked in a legal contest, and then pride comes in to persuade that to retreat is to be conquered: another most fertile source of litigation is ignorance, which costs much time, money, and vexation before it is rubbed off; full ninety per cent. of all the legal contests which arise in our country have their origin in these two causes.

Curb your passions, let reason govern, and rub off your ignorance, and my word for it, the lawyers will have a *short pasture* in your county. T.

Avoid a slanderer as you would a scorpion.

Never pretend to tell what you do not know.

Trust not a profane person.

Application for Premium.

To the President and Members of the Philadelphia Agricultural Society.

GENTLEMEN:

Seeing in the Farmers' Cabinet a premium was offered for the best five acres of corn, and another for the best half acre of sugar beets, I have taken the liberty of presenting to your Society certificates for the raising of both the above articles. Should they meet your approbation, and prove the most abundant, it will be gratifying to the subscriber.

Respectfully yours, &c.,
JOHN KENWORTHY,
No. 5 South Seventh St.

CERTIFICATES.

November 8th, 1839—measured a patch of sugar beet, on the farm of Mr. John Kenworthy, in the township of Oxford, Philadelphia County, and find the same to contain one hundred and twenty perches, and seventeen hundredths of a perch of land.

ISAAC SHALLCROSS.

I do hereby certify that I was present, and did weigh three rows of the sugar beet raised upon the above patch this season, and that the average weight of the said three rows was 886 pounds, which I believe to be the average weight of sixty-one rows which the patch contains, making 54,046 pounds on the whole patch, and at the rate of 71,959 pounds per acre.

THOMAS WALMSLEY.

—

November 8th, 1839—measured two pieces of corn on the farm of Mr. John Kenworthy, in Oxford Township, and find the same to contain as follows:—One lot contains two acres and one hundred and thirty-four perches, and the other two acres thirty-five perches—making five acres and nine perches.

ISAAC SHALLCROSS.

I do certify, that on the above two lots of corn there was produced this season seven hundred and sixty-two bushels of corn in the ear.

ROBERT J. ROBISON.

Report of Committee on Premiums.

Philada. Dec. 31, 1839.

The undersigned, being part of the Committee appointed by this Society for the purpose of examining crops,—do report, That, according to notice from their Chairman, the attention of this Committee was directed to the examination of crops grown by Mr. John Kenworthy, Oxford Township, Philadelphia County, and Mr. James Gowen, of Mount Airy; and after an impartial and sufficient examination of them, do report as follows, viz:—

To Peter Keiffer, farmer, for J. Gowen.

For Sugar Beet, - - - 1st premium.
" " Parsnep, - - 1st premium.
" " Carrots, - - 1st premium.

To James Gowen.

Spring Wheat, - - - 1st premium.

To John Kenworthy.

For Sugar Beets, - - - 2d premium.

In communicating to the Society the above premiums, they have been governed by a desire to award merit where it has been deserved; this will be made apparent by the examination of the statements of Messrs. Kenworthy & Gowen, which accompany this report. The weight of crop at the time of examination appeared to the Committee to be in favour of Mr. Gowen, but which, by the statement of Mr. Kenworthy, fell short of his. The Committee, without intending in the least to detract from the credit due to this statement, believe that as the whole crop was not weighed, (and that the whole crop of Mr. Gowen's was passed through that ordeal,) notwithstanding the difference in weight in favour of Mr. Kenworthy, shown only by averaging the crop by the weight of three rows—that Mr. Gowen's crop was fairly entitled, from its superior culture, to the first premium.

The crops of Sugar Parsneps and Carrots are entitled to their highest admiration, both from their weight, and use in feeding, as well as from the excellent manner of cultivation.

The spring wheat sown on the 6th April, 1839, and housed 24th July, produced on the half acre fifteen and a-half bushels of wheat. This was raised under the shade of several trees, which increased the tendency to mildew, so prevalent this season, and tended greatly to lessen the crop. The experiment we believe to be fully satisfactory to this Committee that this wheat may be grown to advantage.

Mr. Kenworthy's crop of corn, although very good, and entitled to their approbation, cannot be admitted for premium, in consequence of not growing on five continuous acres, which the Committee deem important, and entirely necessary to attain that distinction.

DAVID COMFORT,
GEO. UHLER,
ISAAC W. ROBERTS.

A Statement

Of the culture and product of Sugar Beet, Mangel Wurtzel, Field Carrot, and Sugar Parsnep on the farm of James Gowen, Mount Airy, in the season of 1839.

Submitted and read by James Gowen, before the "Philadelphia Society for promoting Agriculture," at their stated meeting, Wednesday, 5th Feb. inst.

The land set apart for these roots was part of an old apple orchard, and is a light sandy soil, intermixed with Mica, or Isinglass, and from which a crop of corn had been taken the previous year. It was ploughed as early in the spring as possible, say 19th March, and before ploughing was limed at the rate of thirty bushels to the acre. It was permitted to rest a few weeks, after which it had a tolerable dressing of well rotted stable manure immediately ploughed in. Before harrowing, it was treated with a few cart loads, say about 150 bushels, good street dirt, applied lime fashion from the cart, by scattering with the shovel—then harrowed. The quantity of manure in all was not more than would have been used on similar soil in same condition for potatoes. The labour up to sowing was two ploughings, two harrowings, and one rolling, the last operation deemed indispensable in such soil, and to render the drilling more perfect.

Half an acre was intended for mangel wurtzel—half an acre for sugar beet—half an acre for field carrots, and a quarter of an acre for sugar parsnep; but the seed for mangel wurtzel falling short, and there being an abundance of beet seed on hand, the latter was increased to more than half an acre, while the former stood less by as much as the other was increased.

The drill used when working for beet and mangel wurtzel was provided with three teeth, set two feet six inches apart, cutting three drills of two and a half feet apart at one operation. For carrot and parsnep four teeth were furnished, set two feet apart, cutting four drills, two feet asunder at one operation. Seed sown continuously in the drill by hand, in quantity for all about three times as much as plants would be required. All was sown betwixt the 16th and 18th of April. When well up and properly developed, the beet and mangel wurtzel were thinned to six or seven inches apart, the carrots to three or four, and the parsneps to four or five inches apart.

The hoeing was performed by a cultivator set with duck feet or scalpers; it might be dragged by a stout man, but in the present case a light short-tread horse was used, led by a careful man, while a thorough hand held or conducted the scalper. The holder, or ploughman, should be of quick eye and steady hand, to be prepared for the slightest deviation of the horse which might bring the outline scalpers next the drill, to which the inclination tended, upon the plants, which would prove as fatal to them as to the weeds—the scalpers making clean work of all that come in their way. By this method of hoeing, and of keeping the ground clean and loose, much labour and time were saved, for in two hours as much might be done in this way, as would take a good hand to perform in a week, and then it would be better done by the scalper, than by hand hoeing. An hour or two by the scalper at proper and convenient periods, with now and then a ready hand weeding when coarse weeds were observable among the plants, were all the time and labour bestowed at this important stage of culture. Taking the whole labour from the beginning to the gathering of the roots included, it would not be greater than that which is usually bestowed on a well worked patch of corn; nor can the manure used, be estimated, as to quantity and value, to be greater than would be required for potatoes cultivated in the common and usual way on a patch of ground in similar condition.

PRODUCT.

	Tons.	cwt.	qrs.	lbs.
Sugar beet, less than three-fourths of an acre, having in the patch ten large old apple trees, produced 640 bushels clean and close topped roots; a bushel (as ordinarily filled in manner as the 640) weighed 64 lbs.	18	5	2	24
Mangel Wurtzel, less than three-eighths of an acre, having six apple trees in the patch, 320 bushels,	9	2	3	12
Field carrot, half an acre, having nine apple trees in the patch, 260 bushels,	7	8	2	8
Sugar parsnep, one-fourth of an acre, having seven apple trees in the patch, 120 bushels,	3	8	2	8
Total,	38	5	2	24

In less than two acres.—Would not be over one and three-fourths of an acre, deducting space of trees. If allowance be made for trees and their shade, the above result must prove very encouraging to those who intend to turn their attention to the culture of green crops.

The drill and scalper were constructed at home, by and under the direction of Peter Keiffer, gardener to Mr. Gowen, who superintended the whole process of cultivation, and by whom the principal labour was performed, and this he did while having the care of a large garden and neat green house. This is instanced to show that the time consumed in raising the roots, was not so great as many might be led to imagine, and, to pay a well merited compliment to the skill and industry of Peter Keiffer, to whom the premiums should be awarded, if the crops be deemed worthy of such distinction.

Bots.

Of all the insects that irritate and injure that noble animal the Horse, there is none perhaps more vexatious or more pernicious, in all its stages of existence, than the Bot. Its parent, the Horse or Gad-fly of the farmer, the Œstrus Equi of the veterinarian, is common in the autumn, and it is then that the mischief which is performed by its method of perpetuating its species, is usually accomplished. The bot itself is the larvæ or catterpillar of the fly, and the manner of its introduction into the stomach of the horse, where it is to prepare for its final transformation, is a curious illustration of the means provided the insect to effect the end designed.

The male of the gad-fly is rarely observed, but the female, during the season it occupies in depositing its eggs, may be seen, with the extremity of its body turned under and forwards, busily engaged in darting up to certain places about the horse, and at every such movement attaching an egg to a hair, where it usually remains, ready, on the slightest application of the tongue of the animal, to throw open the lid or valve with which it is provided, and leave the minute bot or grub on the tongue, to find its way to the stomach of the horse with its drink or its food. Like many other insects of a similar class, no sooner has the fly deposited its eggs, than it either falls to the earth and dies, or slowly flies away to perish.

The time occupied by the egg in coming to maturity, is partly depending on the temperature, or its position on the animal; but it never exceeds a few days; and at times, the application of a moist warm hand will show they are ready for hatching in twenty-four hours. When, by the action of the tongue, the grub has been removed into the stomach, it attaches itself to the insensible coat of that organ, by the two little hooks with which it will be seen the head is provided. Here it makes a small opening, into which its head or muzzle is plunged, and where it feeds on the juices or mucous which the stomach in that state affords. In this position it remains during the winter, and until the early part of summer, when it detaches itself, and mixing with the contents of the stomach, is voided with the excrementitious matter. As soon as it reaches the earth, it burrows at once beneath it, where it remains in the chrysalis state for a number of weeks, and then emerges a perfect fly, busily engaged in the propagation and perpetuation of its species. Such is the history of the common bot; the one that most frequently falls under the notice of the farmer, and is the most injurious to the animal.

Besides the above bot, there is another, called from its colour the red bot. It is smaller than the common bot, and the fly which is its parent has never been satisfactorily described. It is generally considered more injurious than the common one, but probably without sufficient reason. There is still a third species, the *Œstrus hemorrhoidalis*, or fundament bot, which makes its appearance within the anus and about the tail, the egg of which, it is ascertained, is deposited by a fly, while the intestine is partially developed in voiding the excrements. These bots occasionally produce a little irritation of the parts, but otherwise do not seem to produce injury. They are generally easily detached by the application of a little linseed oil.

Very discordant opinions are entertained among veterinarians, and among farmers, respecting the effects which the presence of bots in the stomach of the horse produces on the animal. Some contend that the bot is never injurious; that it never perforates the stomach of the living animal; that the deaths attributed to the bot, should be placed to the account of the colic; and that when the stomach is found perforated, as it frequently is, it is done by the insect in seeking to make its escape from the change that ensues after the death of the animal; and that, consequently, all the nostrums that have been prescribed for the dislodgment of the bot, are absurd if not positively injurious. An able and interesting discussion of this subject, was carried on in the 13th and 14th volumes of the American Farmer, between Dr. Harden, Mr. Ellis, and others, during which a mass of facts were adduced, proving that if death was not caused by the perforation of the stomach by the bot, it did cause death by choking up the passages leading to or from the stomach. This agrees with the statements of the best European writers on the diseases of the horse. Thus the Cyclopedia, issued by the Society for the Diffusion of Useful Knowledge, says, "In a few instances, the bot has been decidedly injurious; fastening themselves on the edges of the opening into the wind-pipe, they have produced a cough, which no medicine could alleviate, and which, increasing with the growth of the bot, has ended in an irritation under which the animal has sunk. They have also travelled farther than the stomach, and have irritated and choked the first intestine, and thus destroyed the horse; and even in their natural habitation, under probably some diseased state of the stomach, arising from other causes, they have perforated it and caused death."

Mr. Youatt, in his work on the Horse, says the bot "cannot be removed by medicine, because they are not in that part of the stomach to which medicine is usually conveyed; and

if they were, their mouths are too deeply buried in the mucous coat of the stomach, for any medicine that can safely be administered to affect them, and last of all, in due time, they will detach themselves and come away."

That the most useless or pernicious methods are resorted to at times, for the removal of the bot, is evident to all who are acquainted with the treatment to which the horse is subjected in the hands of the ignorant. A correspondent, in the last volume of the Cultivator, mentions an instance in which a horse was cruelly killed by turning boiling water from a tea-kettle down his throat, to cure an attack of the bots. That no substance can be given as medicine, sufficiently powerful to destroy the bot, or make him let go his hold, that would not be fatal to the animal, is evident from the following table of experiments, which is copied from the Medical Register, and which were performed under the direction of Mr. Green. The bots were about two-thirds grown, were vigorous and active, and were exposed to the action of the several substances for the time stated.

Immersed in,	Lived hours.	min.	
Rum,	25	00	
Decoction of tobacco,	11	00	
Strong elixer vitriol,	2	18	
Essential oil of mint,	2	5	
Volatile spirit,	0	56	
Spirits of turpentine,	0	45	
Decoction of pink root,	10	00	No effect.
Fish oil,	10	00	
Linseed oil,	10	00	
Tincture of aloes,	10	00	
Brine,	10	00	
Solution of indigo,	10	00	

Bots placed in a strong solution of camphor, and in one of corrosive sublimate, lived, in the first, till taken out ten hours afterwards, and in the last, six hours without injury. Strong vitriolic acid alone compelled them to let go their hold on the stomach, but this, as is well known, would be death to the horse, if administered.

From our experience, we are inclined to the opinion that in this case, as in many others, prevention is easier than to cure. If, during the few weeks the horse is exposed to the attacks of the gad-fly, the spots where the eggs are deposited were to be slowly rubbed with a cloth moistened in warm water, or even by the naked moist hand, so large a proportion of the young larvæ would be disengaged at every operation, that little danger or injury could ensue to the animal. Moisture and warmth are required to cause the insect to open its covering, and if this is applied in any other way than by the tongue of the animal, the larvæ is infallibly destroyed.

The cut, (fig. 26,) with the accompanying description, copied from Mr. Youatt's great work on the Horse, will show the appearance of the insects in their several stages of existence, and the magnified eggs show the opening through which the worm is attached to the tongue of the horse in the process of licking.

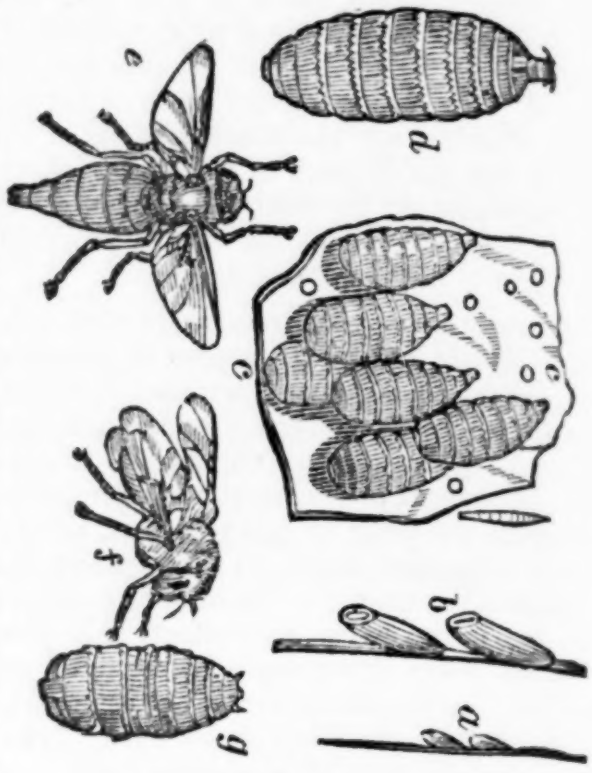

Fig. 26.

a and *b*, The eggs of the gad-fly, adhering to the hair of the horse.

c, The appearance of the bots on the stomach, firmly adhering by their hooked mouths. The marks, or depressions, are seen, which are left on the coat of the stomach, when the bots are detached from their hold.

d, The bot detached.

e, The female of the gad-fly, of the horse, prepared to deposite her eggs.

f, The gad-fly, by which the red bots are produced.

g, The smaller, or red bot.—*Cultivator.*

Improvement of the Soil by Animal and Vegetable Manures.

The great sources of fertility to the farm, are the refuse of the crops which they bear, modified by the farm stock, and preserved and judiciously applied by the husbandman. There is not a vegetable matter grown upon the farm, be it considered ever so useless or noxious, but will, after it has served ordinary useful purposes, impart fertility to the soil, and contribute to the growth of a new generation of plants, if it is judiciously husbanded and applied. There is not an animal substance, be it solid, liquid or gaseous,—be it bone, horn, urine, hair, wool or flesh, or the gases which are generated by the decomposi-

tion of these matters,—but, with like care and skill, may be converted into new vegetable, and afterwards into new animal matters. To economize and apply all these fertilizing materials, is the province and the duty of the husbandman. To aid him in this useful labour, is the object of this essay. And,

1s. *Of the cattle-yard.* This should be located on the south side of and adjoining the barn. Sheds, substantial walls, or close board fences, should be erected at least on the east and west sides, to shelter the cattle from cold winds and storms—the size and the divisions to be adapted to the stock which it is intended to feed. Excavate the centre, or some other part of the yard, placing the earth removed upon the borders, which may be ten to fourteen feet broad, or upon the lower sides, where there is a descent, so that the liquids will all run to the centre, and the borders, which should be left gently inclining, will remain dry and firm, for feeding the cattle upon. The centre may be from two to five feet lower than the borders. The labour may be done principally with the plough and scraper, and smoothed off with the scraper and hoe. We were employed two days and a half, with two hands and a team, in giving a cattle yard the desired shape. When the soil of the yard is not sufficiently compact to hold water, or is not likely to become so by the tread of the cattle, or the puddling effects of the manure, the bottom should be bedded with six or eight inches of clay, well beat down, and well covered with gravel. This is seldom however necessary. Our yards are upon a sand loam, and yet the liquids never sink into the earth.

When the yard is prepared, the first thing done should be to overlay the whole bottom with six to twelve inches of peat swamp earth, where it is at command; and where it is not, with earth from ditches, the roadside, or other rich deposits. It is then fit for the reception of the cattle, and of straw, coarse hay, corn-stalks, and other litter of the farm; and consequently, as they may be gathered, the weeds, potato and pumpkin vines, and other vegetable matters. These materials will absorb or take up the urine and other liquids, and, becoming incorporated with the dung, double or treble the ordinary quantity of manure. During the continuance of frost, the excavation gives no inconvenience; and when the weather is soft, the borders afford space for feeding the cattle, and for a dry passage to the barn. In this way the urine is saved, and the waste incident to rains, &c. prevented. The barns and sheds which adjoin the yards, should be provided with eve-gutters, which should discharge outside of the yard, so that the waters from the roofs may pass off.

As a further precaution against waste by rains, a cistern or tank may be sunk near the yard, into which an under drain may be made to conduct the liquids, when they are likely to accumulate to excess. These liquids may be pumped into casks upon carts, and employed to great advantage upon grass or arable crops. The Flemings call these liquids the *cooked* food of their crops.

To guard against the wasting influence of the sun in summer, a roughly constructed covering, supported by posts, may be erected over the central depot. This is seldom necessary under our mode of management, which requires a thorough cleaning of the yard every spring, for the corn, potato, and other root crops.

The cattle should be kept constantly yarded in winter, except when let out to water, not only because, if suffered to run at large, they poach and injure the fields and meadows, but because they waste their dung; and the yard should be frequently replenished with fresh litter. Upon this plan, from ten to twelve loads of manure may readily be obtained, every spring, from each animal wintered in the yard. If the manure from the horse-stables, and from stalled neat cattle, be added, the quantity will not only be proportionally increased, but the quality improved. Whenever the yard is thoroughly cleaned for spring crops, it ought to be again bedded with fresh earth, and well littered.

2d. *The Stables*, whether occupied by horses or cattle, may be made to contribute much to the value of the yard dung, by their urine, which may be conducted into the yard by paved or other conduits, leading from the stables to the yard. In these, too, litter may be as profitably employed to increase the dung, and to promote the health and comfort of the animal, as in the yard or open sheds. The dung from the horse-stables, if suffered to lie in a mass, is apt to heat and become *fire-fanged*, as it is termed, which very much impairs its quality. Where there are cellars under stables, the dung is thrown down into them, and is there protected from the wasting influence of the weather; but even here it is liable to suffer injury, unless hogs are permitted to root among it, or unless the cellar is frequently cleaned out. An approved practice is, to scatter the dung from the stables over the cattle-yard, which thus retards fermentation, prevents waste, and produces a homogeneous mass of excellent manure.

3d. *The Hog-Pen.* Hogs are excellent animals for manufacturing manure, if they are furnished with the raw material, as peat, earth, straw, weeds, &c., and a suitable place for conducting the process. The composts of their formation are among the cheapest and the best that are used upon the farm.

The slops of the kitchen, the weeds of the garden, the refuse fruits of the orchard, and the offal of the farm, are readily converted, by these swinish labourers, into meat or manure. Hogs are profitable labourers, and should be employed to as great an extent upon the farm as the proprietor's circumstances will permit.

4th. *The Sheep-fold* may be made an abundant source of fertility to the farm. Economy in its management consists in giving abundance of litter, repeated at short intervals, sufficient to absorb the urine, prevent wasting exhalations, and secure health to the flock—and in applying the dung in its recent or unfermented state.—*Buel's Far. Com.*

THE FARMERS' CABINET.

PHILADELPHIA, FEB. 15, 1840.

It is a circumstance of rare occurrence for us to give obituary notices; but we justify ourselves in setting aside our rule respecting it, to announce the decease of Francis S. Wiggins, Esq., who departed this life on the 27th of January, 1840, after a very protracted and painful sickness, which he bore with more than the fortitude of a *Philosopher*,—with the resignation of a *Christian*.

With honour to himself, and much advantage to the community, Mr. Wiggins sustained the relation of Editor to this paper, from its commencement to within a few weeks of the close of his life. Long after the inroads of his fatal, but flattering disease upon his constitution had warned his friends of approaching dissolution, he continued with untiring industry to prosecute his studies, and "drive the quill" for the benefit of his readers.

Mr. Wiggins possessed talents as a writer above mediocrity, but they were not extensively exercised in the production of original essays. He possessed, in an eminent degree, the art of *catering* successfully for his readers; and his selections were always judicious and well chosen. His attachment to agriculture in its different branches as a science was *deep* and *strong*.

No feature in his character was exhibited with more clearness than his uninterrupted cheerfulness; and this happy temperament of mind may be traced to his unlimited confidence in the care of Providence. His severe and multiplied afflictions did not lead to the indulgence of fretfulness and impatience; but to the last he pursued his calling, to the wonder of his friends, evincing a determination to do good while he lived. *Peace to his memory.*

For several months previous to his death, Mr. Wiggins occupied a large part of his time in preparing the manuscript for a work which he entitled, "The Farmers' Own Book, *an Illustration of the Principles of Practical Agriculture.*" The publication of this work is in progress, and will soon be completed, by Mr. Orrin Rogers, No. 67 South Second street, Philadelphia. We have examined some of the proof sheets, and believe the work will be creditable to the author and publisher, and a valuable addition to the library of the young farmer, and the practical agriculturist generally. The work will contain between five and six hundred common size octavo pages, on fine paper with good type.

It will afford us much pleasure to receive the orders of our distant friends for this work, and more especially as we have understood that the pecuniary advantage expected from its publication, are to be appropriated to the author's surviving family.

American Swine Breeder.

We have received a copy of this work from the enterprising publishers, Messrs. Weeks, Jordan & Co., Boston, Mass., for which they will please accept our acknowledgments.

The work is very neatly got up. It is precisely the thing called for by the spirit of improvement prevalent in the community. Every farmer should have a copy; its trifling cost cannot be better expended, for it explains the whole business of pork raising, from the "best breed" to the "flitch of bacon," that might make an alderman's mouth water; besides giving the "true secrets" of making the "hog business profitable." The author's remarks on the "hog-pen" and "manure" will be found in the present number of the Cabinet.

The work is for sale by Messrs. Hogan &

Thompson, No. 30 North Fourth street, and No. 77 Chesnut street, Philadelphia.

Rohan's Potatoes and Tree Corn.

John Dunlap, Esq., proprietor of Effingham Farm, Bensalem Township, Bucks county, Penn., has furnished us with the following statement as the result of his experience in the cultivation of those articles the past season. He planted one Rohan potato cut into twelve setts, in hills, three feet apart each way. The produce was fifty-four potatoes, weighing sixty-four pounds, and measuring one and a half bushels.

The quantity of tree corn planted was one hundred and twenty grains in sixty hills, five feet apart each way—produce three and a half bushels of good sound, well formed ears of uniform growth. Mr. Dunlap has been particular in his experiments, and gives it as his opinion that the article known as the *Chinese Tree Corn* is a valuable acquisition to this section of country. He intends to plant ten acres the coming season, to give it a fair trial, on a more extended scale as a field crop.

He does not think highly of the Rohan potato, as an article for the table; but gives his opinion that from its great yield it will be very extensively cultivated as a food for stock.

We give below the notice for an Agricultural Convention, to be holden in Harrisburg, taken from the Keystone, published in that place. We cannot forbear the expression of our hope that this effort to form a State Society will be successful. We hope the numerous friends to agricultural improvement will move in this matter with an energy and spirit becoming its importance.

Agricultural Convention.

The friends of agriculture, throughout the several counties of the State of Pennsylvania, are invited to appoint delegates to meet in convention, in Harrisburg, on Wednesday, the 19th day of February next, for the purpose of forming a State Agricultural Society, and for the transaction of such other business as may advance the cause of agriculture.

MANY.

Berkshire Pigs.

Stock of this valuable breed of hogs can be obtained from Mr. Ralph Davis, of Radnor Township, Delaware county, Penn. Mr. Davis has been to much pains and considerable expense to obtain the right kind of stock, and purchasers may depend upon obtaining the real Berkshire breed.

New Agricultural Society.

It will be seen by the proceedings of the meeting in Bustleton, that the enterprizing friends of agricultural improvement in the north-eastern section of Philadelphia county are on the alert, and doing something likely to tell upon the success of the good cause. We have the pleasure of knowing several of the gentlemen whose names we find in the list of officers. The work is in good hands—may great benefit result from their exertions. We hope to have the satisfaction of reporting the formation of similar associations in every county of the Keystone State.

At a large and respectable meeting, held on Thursday, the 16th inst., at 2 o'clock, P. M., at the house of Benjamin Snyder, in Bustleton, for the purpose of establishing an Agricultural Society, for the promotion of agricultural interests, Franklin Comly was called to the Chair, and John Bavington appointed Secretary.

The meeting being called to order, a constitution was laid before the meeting for approval, which was unanimously adopted.

On motion, a Committee of seven was appointed by the Chairman to nominate officers for said society—whereupon the following gentlemen were appointed, viz;—John Fox, Jacob Snyder, James Thornton, John S. Vansant, James Veree, Jacob Shearer, James Holmes.

On motion, the meeting adjourned for fifteen minutes, and the Committee reported the following:

President—FRANKLIN COMLY.

Vice Presidents—James Thornton, Jacob Shearer, James Holmes, Jacob Snyder.

Treasurer.—Jacob Shallcross.

Recording Secretary.—John Bavington.

Corresponding Secretary.—Ralph Eddowes.

Executive Committee.—John S. Vansant, Byberry; John Fox, Oxford; John Veree, Lower Dublin; Jacob Shearer, Moreland.

On motion, the officers were elected viva

voce, one at a time, when the former gentlemen were duly elected for the ensuing year.

Resolved, That the Executive Committee have power to receive subscribers to the list for members between this and next meeting.

Resolved, That the proceedings of this meeting be published in all the papers friendly to agricultural interests.

Franklin Comly, *Chairman.*

John Bavington, *Secretary.*

Remittances by Mail.

The Post-Master General has decided: "That a Post-master may enclose money in a letter to the publisher of a newspaper, to pay the subscription of a third person, and frank the letter, if written by himself." Our subscribers will see by the foregoing that they can remit us their subscription money and save the postage, by requesting the Post-master to frank their letters containing such money, he being satisfied that it contains nothing but what refers to the subscription.

From the Boston Times.

Root Crops.

Of the various root crops, the *Potato* stands No. 1.—It is the *magnum bonum*, whether considered as an indispensable for the table, or for the stye or stall. We do not say that it is the most profitable root crop, labour and every thing considered; but we do say it is the most *indispensable* of all crops raised beneath the surface. Ruta Baga, Sugar Beet, Mangle Wurtzel, and the like, may nominally produce a greater value to the acre, without so great an exhaustion to the land; but all these can be dispensed with, while potatoes cannot without great inconvenience and discomfort.

As a general rule, the actual exhaustion of land by root crops—that is, understand us, by the crops *themselves*—is almost in exact proportion to the quantity of nutritious matter contained in those crops. The quantity of nutritious matter—farina, &c.—in the potato, is nearly double to that of the other root crops we have named. It is, in fact, the connecting link between the root and the grain crop; for by extracting the water, and a certain other disagreeable substance, it may be dried and pulverized into flour of a very passable quality for bread and other domestic uses. None of the other vegetables that we know of are capable of such a mode of treatment. The sugar beet contains about nine per cent. of farina, but little or no other nutritious matter.

It is with some surprise that we have noticed the occasional remarks of the highly intelligent and practical editor of the Cultivator, relative to the potato. He seems to consider it on the whole as rather an unprofitable crop, and a great exhauster of land. We leave him to his own calculations as to profit and loss in the crop itself; but that it is *necessarily* a great exhauster of land we deny. We are no converts to the doctrine of this and that exhausters; but on the contrary we believe that *solstitical heat* is the great exhauster of soils. Thus, in this part of the country, potatoes are usually manured in the hill, and early in the fall the crops dug for market, the vines and weeds pulled and piled in heaps, and the manure thus thrown out and exposed to the direct rays of the sun for perhaps two or three months before the snow comes to the relief of the poor exhausted, or rather *exhausting* soil. There is a far greater loss of manure in this way than from the crop itself. When potatoes are dug, let the vines be scattered over the ground as much as possible, and so also the weeds, unless they are ripened sufficiently for seed—in which case they should be thrown into the compost heap to gather moisture and decompose for manure at their leisure. In addition to this, farmers would find it greatly to their account if they would scatter the litter of their barns, or leaves scraped from the forest over the potato field, after harvesting the crop. This litter may be raked off in the spring for compost, or ploughed in; in either case it will pay its way, besides preserving the manure already in the soil from its great enemy, the sun.

For fattening cattle, swine, or *children*, the potato is admirable. It contains just about the quantity nutritious matter adapted to the animal stomach in the best estate. True, a little Indian meal mixed with potatoes is a great help, but there is no necessity for it. For horses, in the winter season, it is one of the best antidotes against the common complaint of constipation—as are also carrots, ruta baga, or any other root crops which horses will eat. Horses and cattle should *always* be fed with some root crops during the winter, but not in quantities sufficient to create too great a relax of bowels. They are better for the blood than the cruel and unnecessary practice of blood letting in the spring of the year. Indeed, when a horse needs physic, we are not sure but roots, in a larger quantity than usual, answer every desirable purpose. We have tried it repeatedly, and so far as our experience goes, we are satisfied that such is the case.

When more at leisure, we shall have more to say about the *exhaustion of soils;* also about *alternation* of root crops. We believe

this is a part of farming, whether considered practically or scientifically, that has been too much neglected.

How to make Farming profitable.

The great secret of success in the cultivation of the earth, is thus explained by Judge Buel, in the address which he prepared for delivery in Connecticut, just before his death.

The alternating system of husbandry has not obtained among us that consideration which its importance demands. It is well known that ordinary lands will not bear a succession of the same crops without a successive diminution of product; and that if grain, grass and roots are alternated, or succeed each other, the decrease of fertility is much less apparent. This is ascribed to the well authenticated fact, that different plants exhaust different fertilizing properties of the soil, or in other words, that each species requires a specific food, which other species do not take up. It is now generally conceded that wheat will not do well in a soil which has no lime in its composition—that clover and lucerne require gypsum—that flax cannot be raised on the same ground oftener than once in six or eight years, with advantage. These facts are explained upon the ground that in analyzing wheat, it is found to contain lime; clover, on analysis, has yielded gypsum at the rate of four bushels to the acre; and the supposition is, that a crop of flax exhausts the soil of some property essential to its perfection, by which it takes years to restore. The crops can derive these supplies from no other source than the soil; and if the supplies are not there, the crop will be deficient or defective.

There is still another reason to offer for alternating crops. The soil, if in grass, becomes annually more hard and compact; the roots are consequently restricted in their range for food, the heat and atmosphere become partially excluded, and the decomposition of vegetable food is arrested. The consequence is, that the finer grass gradually disappears, or runs out, as it is termed, and the grass crop gradually diminishes. If ploughed and cropped occasionally with roots, these inconveniences are obviated; the soil is broke and pulverized, and rendered pervious to solar and atmospheric influence, and the vegetable food which it contains, is thereby rendered solvable; and if manure is given to the tillage crops, as it should, and can be once during the course, the soil will become renovated, and fitted again to receive the grass seeds, with the prospect of a greatly increased burthen of hay.

The grasses are, however, not the only system of crops that are improved by the alternating system of husbandry. The tillage crops, in turn, are alike benefited, not only from the advantages of change, which I have endeavoured to point out, but from the vegetable matters of the sward, which, instead of remaining in a measure dormant and useless, are decomposed, and become the active food of the crop; while the root crops by their pulverizing influence upon the soil, improve it mechanically for both grain and grass.

As a general remark, it may be said, that labour and capital can be expended in no way more profitably by the farmer, than by enriching his lands. God has given to us all the elements of fertility, of plenty, and happiness. He has given to man the capacity of appropriating them to his own use. He has commanded him to exercise these capacities with diligence—and although He has not promised, he seldom ever fails to bestow upon those who honestly keep the command, the highest rewards in temporal happiness.

The great secret of success in agriculture, consists in adapting our crops to our soils, in fitting the soil for the reception, in feeding them well, and in giving them proper culture; and the great obstacles to improvement are, ignorance of the principles or science of agriculture, a blind adherence to old practices, and a parsimony of expenditure. We better understand the economical management of animals than we do of plants. We know that we cannot make fat beef, or pork, or mutton, profitably, without we feed high. It requires a certain amount of food to keep an animal in good condition—all beyond this which the beast can consume, digest, and assimilate, is virtually converted into flesh. Now, it makes a vast difference whether this extra food is converted into flesh in three months, or twelve; because, in the former case, three-fourths of the ordinary food required to sustain life and condition, for a year, is saved to the feeder, besides an equal expense in attendance. It is precisely so with crops. One well fed acre is more profitable than three poor fed acres; because it requires only one-third of the labour, and will oftentimes give an equal or greater profit. Take Indian corn, for example, the average product of which I will assume to be thirty bushels an acre. Now if we make an acre of suitable rich soil, with twenty-five loads of unfermented manure, and tend the crop well, we may get ninety bushels of corn from the acre—and the amount has oftener been swelled to one hundred, and one hundred and twenty. Here, then, is a nett gain of sixty bushels by feeding an acre well, over the nett gain of an acre not fed well. In regard to the cost of the manure, call it if you please $25, and consider it capital expended. If you deduct this from the profits of the well fed acre, there would still remain a difference

in favour of the latter, according to the common scale of prices, of $25. If you merely charge the interest on the outlay, this would be $1 50, and would diminish the difference between the good and bad acre but this amount, or would leave the crop on the rich acre worth $58 more than on the poor acre. Estimate the farmer's corn crop at ten acres, and you will perceive that the cultivator of the ten rich acres realizes a nett $580 more than the cultivator of the ten poor acres. Carry out this comparison to the products of the whole farm, and we shall at once discover why the good farmer finds a profit in an outlay every four years of $20 an acre in enriching his lands. But if we suppose—what is, in fact, the truth, that the long manure which causes this great increase in corn crop, is as good for the next crop as it would have been, had it been summer yarded, as was once, and is now often the case, the absolute additional expense is nothing—the food of the corn crop is absolutely saved to the farm. I might carry these illustrations to other crops, to farms and to districts of country. In my journeying in the states of New York and New Jersey, I have seen many farms, and some districts, where the intrinsic value of lands has been enhanced a thousand per cent., or in a ten fold degree, by the almost magic influence of improved husbandry, based upon the principle of working no more land than can be kept rich and worked well.

These facts suggest to the farmer who would keep the fertility and productiveness of his soil, the necessity of

1st, Consuming his crops, as far as practicable, upon his farm, or returning to it an equivalent in manure for what he carries off.

2d, Of carefully husbanding every animal and vegetable substance which he can command, of preserving it from waste, and of faithfully and judiciously applying to the soil as food for his crops; and

3d, Of studying those laws of nature which govern, to a greater or less extent, the whole business of the farm, and which can never be violated with impunity.

Breeding of Cattle and Sheep.

In an essay on this subject, read at a meeting of the English Agricultural Society, Earl Spencer states it to be the result of his own experience, "that in most cases the qualities of the male parent predominates in the offspring," and that therefore those who pay no attention to the description of males to which they put their females, "consider as a matter of indifference that on which the profitable or unprofitable nature of their occupation mainly depends."

Be always at leisure to do good.

Chapter of Recipes and Hints.

To soften water.—A few ounces of soda will soften a hogshead of the hardest water. It is greatly superior to either pot or pearl ash, giving a delicate whiteness to the linen, without the slightest injury, and it never, unless excess is used, in the least affects the hands.

Sore Throat.—Take a glass of olive or sweet oil, and half a glass of spirits of turpentine; mix them well together, and rub the throat externally, wearing flannel round it at the same time. It proves most effectual when applied early, in curing a sore throat.

To cure Chilblains.—Take an ounce of white copperas, dissolved in a quart of water, and occasionally apply it to the parts affected with chilblains. This will ultimately remove the most obstinate chilblains. This application must be used before they break, otherwise it will do injury.

A salve made of carrots grated fine, simmered in lard till quite brown, and then separated by a strainer, is considered excellent for chilblains.

For a Fellon.—If a fellon or runround be coming on your finger, you can do nothing better than to soak it thoroughly in hot lye.

Yankee Sweet-meats.—The Maine Temperance Gazette says that it is nothing new to convert pumpkins into sweet-meats—and furnishes the following recipe for the same.

"One pound of pumpkin and a lemon to each pound of sugar; a little water to be added to the sugar; the fruit, properly sliced, thrown into the syrup, and prepared like other preserves. Improved by standing a few weeks. Cucumber and water-melon rinds, preserved in the same way, also resemble the West India sweet-meats."

Candle Wicks.—Those who make candles will find it a great improvement to steep the wicks in lime water and saltpetre, and dry them. The flame is clearer, and the tallow will not "run."

Sick Head Ache.—The patient is recommended to take a spoonful of ginger mixed with a lump of sugar, in a tumbler three parts full of water, with the chill off; to sit for a quarter of an hour, with his feet in water agreeably warm, and to apply a napkin wrung out with cold water to the temple or forehead.

To prevent earthen ware from cracking.—It is a good plan to put new earthen ware into cold water, and let it heat gradually until it boils—then cool again. Brown earthen

ware, in particular may be toughened in this way. A handful of rye or wheat bran thrown in while it is boiling, will preserve the glazing, so that it will not be destroyed by acid or salt.

Iron ware.—New iron should be very gradually heated at first, after it has become inured to the heat, it is not as likely to crack.

To prevent chapped hands.—A French writer recommends the use of potatoes three-fourths boiled, as a substitute for soap. They prevent *chops* in the hands in winter, and keep the skin soft and healthy.

Brittania ware.—Brittania ware should be first rubbed gently with a woollen cloth and sweet oil; then washed in warm suds and rubbed with soft leather and whiting. Thus treated, it will retain its beauty to the last.

Salve for inflamed wounds.—Lard which has been melted and cooled in fresh water four or five times in succession, and then simmered with sliced onions, and strained, makes a most excellent salve for wounds inflamed by taking cold.

To clean brass.—Clean a brass kettle before using it for cooking, with salt and vinegar. Brass andirons should be cleaned, done up in papers, and put in a dry place during the summer. Vinegar or vitriol water mixed with rotten stone is a good preparation for cleaning brass of any kind.

Soap.—Use hard soap to wash your clothes, and soft to wash your floors. Soft soap is so slippery that it wastes a good deal in washing clothes.

Horse-Radish.—It is easy to have a supply of horse-radish all winter. Have a quantity grated while the root is in perfection, put it in bottles, fill it with vinegar, and keep it corked tight.

NOTE.—It is very much improved by keeping in this way if kept from the action of the air.

Boil your molasses.—When molasses is used in cooking, it is a prodigious improvement to boil and skim it before you use it. It takes out the unpleasant raw taste, and makes it almost as good as sugar. Where molasses is used much for cooking, it is well to prepare one or two gallons in this way at a time.

To preserve Suet.—Suet keeps good all the year round, if chopped and packed down in a stone jar, covered with molasses.

To prevent woollens from shrinking in washing.—Woollens should be washed in very hot suds, and not rinsed. Lukewarm water shrinks them.

Under Beds.—Barley straw is the best for beds; dry corn husks slit into shreds are better than straw.

Do not wrap knives and forks in woollens. Wrap them in good strong paper. Steel is injured by lying in woollens.

Never allow ashes to be taken up in wood, or put into wood. Have important papers all together, where you can lay your hand on them at once, in case of fire.

The oftener carpets are shaken the longer they will wear; the dirt that collects under them grinds out the threads.

If you wish to preserve fine teeth, always clean them thoroughly after you have eaten your last meal at night.

For a cold and hoarseness.—Boil a middling sized turnep, lay it in a common saucer, and pour on it three table-spoon fulls of common molasses; the juice of the turnep is extracted, and forms a syrup which will be found very efficacious in removing the hoarseness and sore throat of a common cold.

Corn Lamp Oil.—We have been using corn lamp oil for some time past, and are greatly pleased with it as a light dispenser. It burns freely and clear, affording a strong brilliant light from the common lamp. It is free from any disagreeable smell in burning, and costs a third less than good winter sperm oil. So far as we have tested it, we give corn lamp oil the decided preference.

Pig Trough.—Take two pieces of board or plank of the length that you wish your trough; put two of their edges together at right angles; thus V, and nail them strong. Then take two pieces something longer than the trough is wide, and nail upon the ends. Then take some clay mortar and fill up the chinks to prevent its leaking, and it is done. The food settles down in the angle at the bottom of the trough, and the pig will lay his sharp under jaw into it completely, while the long ends prevent its being upset so easily as the old kind. Any body, who can saw a board off, or drive a nail, can make one. If you have no trough for your pig, just try your hand at making on this plan.—*Gen. Far.*

Every man is responsible for his own acts, and for the acts of his agents, within the scope of their authority.

Promote not an unworthy man; it disgraces humanity.

A moment of time is a monument of mercy.